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La denuncia shock del Governatore De Luca

«Vicini al crack: non c'è un euro»

Giornata Mondiale del Malato

l Ssn equo e solidale è in pericolo Gli infermieri a fianco dei cittadini

l'editoriale di Teresa Rea

È pensabile che in una nazione, tra le prime sei o sette potenze al mondo, l'accesso alle cure diventi un privilegio per pochi? L'articolo 32 della Costituzione lo nega: «La Repubblica tutela la salute come fondamentale diritto dell'individuo e interesse della collettività, e garantisce cure gratuite agli indigenti». Eppure, quasi senza accorcergene, il servizio sanitario nazionale, equo, solidale e universalistico, cioè per tutti, già oggi mostra ampie crepe. Non lo si dice chiaramente. Più che altro somiglia a un lento, ma progressivo, inesorabile sgretolamento. Un disimpegno strisciante.

Forse per far posto, poco per volta, alla sanità delle assicurazioni. Come fa capire lo stesso presidente Vincenzo De Luca in alcune dichiarazioni che riportiamo nelle pagine di questo giornale. E alcuni segnali effettivamente ci sono: il costante sottofinanziamento; la carenza e la fuga di personale; perdita di posti letto; le lunghe liste d'attesa; la crescita della spesa privata e alcuni altri numeri macro lo dicono chiaramente. Basta metterli insieme. E come diceva Agatha Christie: «Un indizio è un indizio, due indizi sono una coincidenza, ma tre indizi fanno una prova». Vediamoli insieme. La spesa sanitaria pubblica nazionale nel 2019 è stata pari al 6,4% del Pil, una delle spese più basse in Europa e dei Paesi ricchi (in Germania è 9,8, in Francia 9,3, nei Paesi Bassi 8,4, in Belgio 8,1, in Austria 7,9, nel Regno Unito 7,9, negli USA 13,2). Anche se l'Organizzazione Mondiale della Sanità invita gli Stati a non scendere mai sotto il 6,5%. Questi continui tagli hanno portato ad avere 3 posti letto ogni mille abitanti (la media Ocse è 4 e la Germania ne ha 8, l'Austria 7, la Francia 6). Abbiamo 6 infermieri ogni mille abitanti (la media Ue è 8 e la Germania ne ha 14, i Paesi Bassi 11, l'Austria 10). La spesa sanitaria privata è in costante aumento. Ecco il trend degli ultimi anni: nel 2020 è stata di 43 miliardi, nel 2019 era di 39,5 miliardi, nel 2005 era di 25 miliardi. In media nel 2019 ogni italiano ha speso di tasca propria 640 euro per curarsi. Di questi, 400 euro per cure necessarie che avrebbero dovuto essere fornite dal sistema sanitario nazionale (prestazioni diagnostiche, curative, riabilitative o preventive. Chi questo ulteriore salasso non ha potuto affrontarlo ha rinunciato a prestazioni sanitarie utili per ragioni economiche: il 7,9% degli italiani (circa 4 milioni) ha dovuto soprassedere ad almeno una prestazione prescritta. Ovviamente a rinunciare sono soprattutto i poveri e meno abbienti e i cittadini del Sud Italia (più poveri e con un servizio sanitario meno finanziato dallo Stato rispetto a quello del Nord). In questo scenario poco incoraggiante s'innesta poi il fantasma dell'autonomia differenziata. Se si avvantaggiano di più le Regioni che già da tempo stanno più avanti è quasi superfluo sottolineare il pericolo che invece di procedere verso un sostanziale riequilibrio le diseguaglianze aumenteranno ancora di più. E' come un serpente che si morde la coda: più danari incassano le Regioni benchmark, migliore sarà il servizio sanitario offerto, diventando sempre più attraenti. Al contrario, le Regioni sanitariamente più povere continueranno a depauperarsi per pagare i costi dell'assistenza fuori regione. Di recente, Nino Cartabellotta, presidente del Centro studi Gimbe ha sostenuto che con l'autonomia differenziata «si darà il colpo di grazia al Servizio Sanitario Nazionale e aumenteranno le diseguaglianze regionali, legittimando normativamente il divario tra Nord e Sud, violando il principio costituzionale di uguaglianza dei cittadini nel diritto alla tutela della salute».

Noi infermieri non ci stiamo. Difenderemo con le unghie e con i denti l'accesso universale alle cure. Il nostro patto con i cittadini è chiaro. Insieme per una sanità equa, sostenibile e solidale.

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Politica sanitaria

«La sanità pubblica rischia

Il presidente della Regione lancia l'allarme sulla tenuta del Ssn. La Conferenza delle Regioni: preoccupati pe
il Governo. «E' evidente che c'è qualcuno che ha in testa un altro modello di sanità, fatta con le assicurazi

di **Pino De**

«Non c'è un euro per i pronto soccorso, né per il personale delle case di comunità, non c'è nulla di nulla, anzi ci sono passi indietro rispetto al passato». E' l'allarme lanciato dal governatore della Campania, Vincenzo De Luca, nel corso di una delle ultime dirette facebook del venerdi. «Mancano i fondi, lo stesso ministro Schillaci ha detto che ci vorrebbero altri 5 miliardi», ha aggiunto sottolineando che ce ne vorrebbero almeno altri 20 per raggiungere il livello della sanità pubblica in Gran Bretagna e 40 per il livello della Germania. Esternazioni contro il governo? No, dati di fatto. «La sostenibilità economico-finanziaria dei bilanci sanitari è fortemente compromessa dall'insufficiente livello di finanziamento del Servizio Sanitario Nazionale». È quanto scrive il coordinatore della Commissione Salute delle Regioni, **Raffaele Donini** in una lettera inviata al Ministro della Salute, **Orazio Schillaci** e a quello dell'Economia, **Giancarlo Giorgetti.** Il De Luca pensiero è condiviso dagli da tutti gli assessori alla sanità d'Italia, alle prese con la mancanza di soldi, ma anche di personale "le cui carenze - si dice nella missiva inviata al Mef e al ministero della Salute - hanno raggiunto un livello di criticità insostenibile e trasversale a molteplici settori e servizi sanitari, con conseguenti disservizi che sono, purtroppo, oggetto delle cronache quotidiane". Il ragionamento delle Regioni è che il mix tra l'insufficienza delle risorse disponibili, la carenza di personale, il continuo rincaro dei prezzi delle materie prime e dei consumi energetici rischiano molto seriamente di compromettere il carattere equo, universalistico e solidale del sistema sanitario nazionale. Rendendo, per questa via, l'accesso alle cure un privilegio di pochi e non più un diritto di tutti, come

Politica sanitaria

a il crack: non c'è un euro»

er il mix tra risorse finanziarie insufficienti e carenza di personale. Lettera al Mef e a Schillaci. De Luca attacca ioni private. Dobbiamo combattere con le unghie e con i denti per difendere l'accesso alle cure per tutti»

Martino

pure sancito dalla Costituzione. «Possiamo considerarci ancora una **sanità pubblica**, ma non per molto tempo se l'atteggiamento del Governo rimane quello di oggi, che è totalmente irresponsabile». Osserva il governatore della Campania. «Se le liste di attesa sono lunghe è colpa del Governo? Assolutamente sì - ha aggiunto De Luca - se non c'è il personale e non ci sono le risorse, come si svuotano le liste di attesa? Dobbiamo avere il personale dedicato a queste attività. E' evidente che c'è qualcuno che ha in testa un altro modello di sanità. I nostri confratelli che stanno al Governo a Roma non sono ingenui, c'è qualcuno che ha in testa l'idea della sanità fatta con le assicurazioni private. Dobbiamo combattere con le unghie e con i denti contro questo modello che hanno in testa».

In Lombardia 41mila posti letto, in Campania 12mila

«Posti letto. E' una vergogna. Voglio ricordare che in Lombardia ci sono 41mila posti letto a fronte dei 12mila in Campania, e questa è una vergogna». Il presidente della Regione Vincenzo De Luca, come al solito non le manda a dire. L'occasione per denunciare sperequazioni e disequilibri territoriali in materia di tutela della salute è data dall'inaugurazione dell'ampliamento della clinica Pineta Grande a Castel Volturno, territorio difficile e cosmopolita con povertà diffusa. Dove l'unico presidio sanitario è proprio la clinica con testa privata ma a vocazione pubblica.

Sperequazione - E con un solo dato fotografa il divario Nord/Sud sull'offerta sanitaria e sulla distribuzione dei fondi per la sanità, con uno sguardo preoccupato sul fronte dell'autonomia differenziata. «Ancora oggi, nonostante il passo in avanti che abbiamo fatto lo scorso anno, non siamo arrivati alla media dei trasferimenti nazionali, quindi c'è ancora da combattere e tenere gli occhi aperti in relazione all'autonomia differenziata che può rappresentare un colpo durissimo per la sanità meridionale». «Anche una struttura eccellente come Pineta Grande - ha proseguito il Governatore - vive perché è convenzionata con il sistema sanitario pubblico, altrimenti non nascerebbe. E quindi è evidente che arriviamo ad un certo punto nel quale la disponibilità o meno delle risorse statali per la sanità diventa decisiva». Per De Luca, «l'importante è sapere con chiarezza che dobbiamo avere un sistema equilibrato, la sanità pubblica è indispensabile come servizio di civiltà per la povera gente. Poi abbiamo la possibilità di utilizzare anche eccellenze private, ma partendo dalla difesa della sanità pubblica del nostro Paese».

Investimenti - «Sul fronte della sanità in Campania ci sono due miliardi di investimenti con dieci ospedali nuovi che stiamo realizzando, dal Ruggi d'Aragona all' ospedale di Sorrento, dove partirà la gara a breve, fino all'ospedale di Solofra e al terzo padiglione di Nola e quello di Castellammare».

Politica sanitaria

L'Opi denuncia: "Gli infermier

Lettera aperta dell'Ordine di Napoli al governatore della Campania. L per gli organici inadeguati, per le minacce e le aggressioni, per le pis che impongono turni massacranti e carichi di lavoro insostenibil

di **Pino De**

Un drammatico fatto di cronaca, un infermiere che ha pagato con la vita lo stress e la fatica accumulata negli anni, ha spinto la presidente Teresa Rea a scrivere una lettera/denuncia al governatore della Campania, Vincenzo De Luca. Una missiva inviata, si dice testualmente, "per segnalare il malessere di una professione, quella infermieristica, segnata da oltre dieci anni di blocco del turn over, dal mancato ricambio generazionale, da una pandemia che ha fatto molte vittime anche tra gli infermieri, dall'annosa carenza di organici e dalle tante difficoltà di una professione di frontiera, mal pagata e senza alcuna prospettiva di carriera". Il triste episodio ricordato con umanità e partecipazione dalla Presidente Rea, rappresenta, secondo i vertici della professione, un evento sentinella da non sottovalutare; magari generato da ritmi

De Luca, accordo per svuotare liste d'attesa Ma mancano 10mila dipendenti

Svuotare le liste di attesa «facendo un accordo con il comparto sanitario privato, laboratori e cliniche». Questo l'obiettivo annunciato dal presidente della Regione Campania Vincenzo De Luca. «Lo svuotamento delle liste di attesa - ha spiegato - è un problema nazionale. Come Campania siamo nella media, pur avendo oltre 10mila dipendenti in meno, ma vogliamo fare di più. Da qui l'intenzione di fare «un accordo con il comparto sanitario privato, laboratori e cliniche, e un accordo con le farmacie per le prenotazioni da fare anche al di là dell'Asl di appartenenza, per poi riversare tutte le prenotazioni sulla Centrale unica di prenotazione. Pensiamo di definire un ambito territoriale di garanzia: facendo l'esempio di Napoli, suddividiamo la città in tre ambiti e in ognuno di questi c'è una struttura pubblica, ma anche le strutture private, in grado di erogare le prestazioni. Quindi, se il pubblico non ce la fa, il cittadino avrà il tempo di prenotazione adeguato per una struttura di laboratorio o clinica privata a cui rivolgersi». Secondo De Luca si tratta di «una rivoluzione, un obiettivo veramente ambizioso» per raggiungere il quale «ci vorrà qualche settimana. Dobbiamo fare dalla prossima settimana l'accordo con le farmacie per le prenotazioni, oggi si prenota solo rispetto all'Asl di appartenenza, quindi dobbiamo avere l'intesa per poter utilizzare le farmacie per fare le prenotazioni sul Cup, poi faremo l'accordo con le cliniche e i laboratori privati che devono integrarsi con le strutture pubbliche nell'erogazione delle prestazioni. Cercheremo di bruciare i tempi, aprile-maggio può essere un tempo congruo per avere la messa a regime di questo sistema integrato di servizi da offrire tra strutture pubbliche e private

Rivoluzione digitale - «Un altro risultato del lavoro di questi mesi che colloca la Campania all'avanguardia in Italia: siamo oggi la prima Regione d'Italia per il fascicolo sanitario elettronico, il 92% dei referti viene riversato sulla piattaforma digitale». «Già nei mesi scorsi - ha aggiunto De Luca - abbiamo attivato il 'Portale del cittadino' e i cittadini, tramite la piattaforma Sinfonia o l'app dedicata possono decidere la nomina del medico di famiglia, la rinuncia, possono avere il quadro delle vaccinazioni, degli screening. Oggi inseriamo nella piattaforma digitale anche il fascicolo sanitario elettronico. Questo ci serve per dare a ogni cittadino la documentazione sulla propria storia medica, ogni cittadino sa con un unico documento qual è la propria situazione sanitaria. Questo consente a un medico, o anche a un chirurgo che si trova in ospedale un paziente che viene ricoverato, di avere in tempi immediati la fotografia della situazione sanitaria del paziente, ovviamente sempre su autorizzazione del paziente per ragioni di privacy».

...i sono al limite delle loro forze"

La presidente Rea segnala il grave disagio avvertito dalla professione tole puntate alla tempia. Ma anche per modelli organizzativi desueti i, senza uno straccio di valorizzazione professionale e di carriera.

S. MARTINO

e condizioni di lavoro diventati insostenibili. Si parla in questi casi di sindrome di Burn Out: un insieme di sintomi che deriva da una condizione di stress cronico e persistente, associato al contesto lavorativo.

La missiva - *"Sono seriamente turbata e preoccupata. Ogni giorno decine di colleghi mi segnalano difficoltà e problemi. E molti si dicono esasperati. Sono sfiniti per gli organici inadeguati che pesano sul lavoro di tutti i giorni, ma che sopportiamo in silenzio da più di dieci anni. Un peso aggravato da una pandemia che in oltre due anni ha spezzato troppo vite tra i sanitari, soprattutto tra gli infermieri e che richiede concentrazione e dedizione quotidiana oltre il normale. Siamo amareggiati. Per le continue mortificazioni verbali, le aggressioni, le pistole puntate alla tempia, da parte di un'utenza a sua volta esasperata, frutto di diffidenza accumulata e di disservizi che non dipendono dagli infermieri.*

Usurati - *A quanto fin qui già detto, si aggiungono certi modelli organizzativi desueti che impongono turni massacranti e carichi di lavoro insostenibili, ma che ogni giorno sopportiamo per tenere fede a un giuramento etico e professionale che stiamo pagando a carissimo prezzo.*

Demansionamento - *La situazione si è fatta ormai insostenibile, Governatore. Perché a fronte di tutto questo, degli allarmi inascoltati, non c'è traccia di valorizzazione professionale e di carriera. Tantomeno di gratifiche economiche. Anzi, di fatto si assiste ad un sostanziale demansionamento della professione per mancanza di operatori di supporto. E allora devo dire che la misura è colma. I colleghi sono stufi delle pacche sulle spalle, degli "angeli" e degli "eroi". Gli infermieri di Napoli chiedono che sia riconosciuta una vera dignità a una professione che finora ha dato tutto senza ricevere niente, pur stando sempre al fianco dei cittadini, lavorando in costante emergenza, ammalandosi più e peggio di ogni altra categoria, rinunciando a ferie, permessi, progetti di carriera e di vita.*

Risposte - *E' tempo di agire. Bisogna finirla con i tagli degli ultimi venti anni in cui la salute è stata considerata un costo anziché un investimento per la collettività. Ma quello che va rimarcato è il valore degli infermieri che curano nonostante la paura, il pericolo di aggressioni, le minacce. E continueremo a farlo, con la disponibilità di sempre a trovare soluzioni e modelli organizzativi condivisi e sostenibili. La civiltà rispetto alla barbarie. Un'etica che però viene spesso fraintesa e mortificata dalle istituzioni e tal volta anche dagli stessi nostri assistiti. Parole e promesse non bastano più. Ora a queste devono seguire i fatti.*

Politica sanitaria ATTO AZIENDALE

Restyling Asl Napoli 1, valorizzati gli infermieri

L'Ordine delle professioni infermieristiche di Napoli sottolinea l'importanza nella nuova organizzazione aziendale: attribuita una struttura dedicata agli infermieri che entrano nei dipartimenti con ruolo e competenze. Nel piano previsto un potenziamento dei pronto soccorso e una maggiore integrazione tra ospedali e territorio.

di **Dario de Martino**

Un disegno ambizioso di modernizzazione e di funzionalità. Con una filosofia di base che guarda a una maggiore integrazione tra ospedale e territorio, ma anche a una sostanziosa valorizzazione delle figure professionali fin qui rimaste indietro nell'organizzazione. A cominciare dalle professioni sanitarie, infermieri in prima fila. E' la rivoluzione che l'Asl Napoli 1 Centro vuole intraprendere. E' contenuta in un documento illustrato in due incontri con le maestranze interne, con i rappresentanti degli ordini professionali e con i sindacati. In esso si delinea la nuova offerta sanitaria dell'Asl, sia in termini di potenziamento di ospedali, presidi territoriali e strutture, sia in termini organizzativi. Un progetto con il quale s'intende rispondere alla crescente domanda di salute da parte dei cittadini e a colmare quelle carenze e disfunzioni ancora presenti, a cominciare dall'ingolfamento dei pochi pronto soccorsi rimasti aperti e funzionanti e dall'assoluta carenza di presidi intermedi territoriali.

Ospedali - La riapertura dei pronto soccorso del **Loreto Mare** e del San Giovanni Bosco (frenata per mancanza di personale); l'espansione del San Paolo (confermato a via Terracina) e dell'Ospedale del Mare (dove è prevista la Terapia intensiva neonatale e l'accorpamento del presidio intermedio di Barra) sono gli elementi trainanti del progetto. Ma andiamo per gradi. La conversione più volte annunciata in Ospedale di Comunità riguarderà solo una parte del presidio di via Vespucci. Il pronto soccorso sarà riaperto e con esso funzionerà un reparto di Rianimazione con 10 posti letto. Prevista poi una Pediatria con 20 unità che si aggiungeranno al reparto oggi attivo di Medicina generale e alla Chirurgia, insieme all'Ematologia e all'Oncologia già da tempo in funzione dopo la pausa covid. L'Ospedale **San Paolo** sarà completamente ristrutturato, per diventare un Dea di primo livello e non sarà delocalizzato. E' previsto un allargamento strutturale nell'attuale sede di via Terracina (forse ci sarà posto anche per un'elisuperficie) e il potenziamento strumentale e di personale. Alle attuali discipline sanitarie sarà aggiunta la Psichiatria e la Chirurgia pediatrica. Dodici i posti di Cardiologia programmati a Fuorigrotta, 6 di Utic, 18 di Chirurgia generale, 26 di Medicina, 16 di Neurologia, 4 di Oculistica, 16 di

Ortopedia, 24 di Ostetricia e di Ginecologia confermando i 4 di Medicina della riproduzione, il Nido e la e la Neonatologia, l'Otorino, l'Urologia, la Terapia intensiva, la Gastroenterologia e il Pronto soccorso con la medicina di Urgenza. Per il **San Giovanni Bosco** oltre al Pronto soccorso, la cui riapertura slitta a dopo il 3 aprile come prevista, saranno potenziate tutte le discipline come la day surgery, fiore all'occhiello della Asl, la Chirurgia, la Neurochirurgia con la Neurointerventistica per gli Stroke, la Cardiologia, l'Unità coronarica e l'emodinamica.

Il Territorio – Solo 10, una per distretto, le unità complesse sul territorio e 41

quelle semplici e dipartimentali. Sul fronte delle cure domiciliari e della terapia del dolore da segnalare i due Hospice previsti al San Gennaro e allo Sciuti di Scampia (ciascuno di 12 posti letto), a cui si aggiungono i 10 per pazienti in coma vegetativo (Suap). Due anche i centri clinici nelle carceri con 60 posti a Poggioreale e 90 a Secondigliano. Un'unità di assistenza ai migranti, la riabilitazione cardiologica territoriale integrata con le cardiologie ospedaliere completano l'offerta.

Personale – Pur mancando una previsione se pure di massima del personale da reclutare per tenere in piedi il progetto, si salutano con soddisfazione i bandi per i primi concorsi in Campania per la dirigenza delle professioni sanitarie e tecnico sanitarie, della riabilitazione e prevenzione .

Dirigenza professioni sanitarie, partiti i primi concorsi

(ddm) «L'Opi Napoli saluta con soddisfazione l'avvio dei concorsi per la dirigenza delle professioni sanitarie tutte, come previsto nell'atto aziendale dell'Asl Napoli 1. L'Ordine delle professioni infermieristiche di Napoli - dice inoltre la Presidente Teresa Rea - sottolinea l'importanza nella nuova organizzazione aziendale attribuita alle professioni sanitarie con una struttura dedicata agli infermieri, ma soprattutto apprezza l'inserimento di quest'ultimi nei dipartimenti con ruolo e competenze». L'Opi Napoli «ringrazia, a questo proposito l'impegno assunto dal direttore Verdoliva e gli ordini professionali che hanno lavorato con competenza e metodo alla stesura di questo atto aziendale che segna una pietra miliare nell'organizzazione della sanità in Campania».

Un progetto ambizioso, ai limiti del possibile, vista anche la drammatica mancanza di risorse economiche denunciata dal presidente della Regione Campania Vincenzo De Luca. Anche se buonissima parte degli interventi previsti nell'atto aziendale dell'Asl Napoli 1 dovrebbero essere finanziati con i fondi che il governo trasferirà alle regioni nel pacchetto Pnrr. Ma la mezza rivoluzione non riguarda solo le strutture e il potenziamento dei presidi sanitari.

Il cambio di passo, come anticipato nelle dichiarazioni della Presidente Opi Napoli Teresa Rea, c'è soprattutto nell'organizzazione interna e nella valorizzazione delle professioni sanitarie. Il direttore generale dell'Asl Napoli 1 Ciro Verdoliva incassa quindi il parere favorevole degli ordini professionali che hanno lavorato ventre a terra con la struttura aziendale per dare forma e contenuto al progetto. Nel nuovo atto aziendale, sottolinea la Presidente Teresa Rea "finalmente ci sarà un'organizzazione capillare, con l'inserimento di infermieri con competenze gestionali in tutti dipartimenti. Un progetto per la realizzazione del quale gli infermieri possono e intendono dare un contributo prezioso". La presidente Rea ringrazia inoltre l'ingegnere Verdoliva "per l'impegno assunto in questo senso e gli ordini professionali che hanno collaborato alla stesura del documento organizzativo. Auspicando in futuro ulteriori collaborazioni per valorizzare i professionisti e migliorare i servizi offerti ai nostri cittadini negli ospedali e sul territorio".

Politica sanitaria AGGRESSIONI

Aggressioni in ospedale, torna i

I due nosocomi, Pellegrini e Ospedale del Mare, sono sotto il controllo delle forze dell'ordine. Toccherà

chiediamo il ritorno degli agenti nei presidi sanitari. Ci sono volute migliaia di aggressioni, a

di **Antonio Uccello**

È stata scelta una posizione strategica: proprio davanti alla porta d'accesso alla sala del pronto soccorso. Così da rendere ben visibili le divise della polizia agli utenti: rassicurando le persone per bene, ma soprattutto avvertendo malintenzionati, bulli e guappi di quartiere.

E' tornata così a funzionare, dopo anni, il drappello di forze dell'ordine all'Ospedale Pellegrini. Mentre all'Ospedale del Mare la presenza delle forze dell'ordine incomincia da adesso. Ci sono volute infinite aggressioni, minacce, ingiurie e violenze d'ogni genere al personale sanitario, con infermieri e medici in prima linea, prima che ci si rendesse conto che la decisione andava presa, prima che succedesse il peggio. Dall'inizio dell'anno di aggressioni se ne contano più di dieci solo nel presidio sanitario della Pignasecca. L'ultimo episodio proprio al Pellegrini, lo scorso 21 febbraio, quando un 27enne dei Quartieri Spagnoli, il cui padre era deceduto per un infarto, aggredì due infermieri provocando, tra le varie conseguenze, un trauma cranico al viso di uno dei sanitari, con una prognosi di 21 giorni. Un episodio di violenza, cieca, brutale che fece scattare l'allarme anche tra i vertici del governo locale e della Questura. In poco tempo, le indicazioni del ministro degli Interni Matteo Piantedosi, che già aveva annunciato il ripristino dei posti di polizia nelle strutture ospedaliere più a rischio, sono diventate operative. L'ufficio di polizia resterà aperto ogni giorno con un poliziotto alla volta di guardia, pronto a intervenire su piccole cose. Ma pronto anche a chiamare al commissariato di Montecalvario che si occupa del presidio per chiedere rinforzi. Tre i turni quotidiani: dalle 7 alle 13, dalle 13

il drappello di polizia

à poi al Cardarelli, al San Giovanni Bosco, al Santobono. Rea: *"Da anni ltrettanti infermieri feriti, umiliati, minacciati. Bene primo passo"*

alle 19 e dalle 19 all'1 di notte. Saltano subito agli occhi due cose: la presenza di un solo poliziotto per turno e la mancanza di presidio nelle ore notturne. Due aspetti sui quali è già montata la polemica. «Qui la notte succede di tutto. Sono le ore più difficile", dice preoccupato un infermiere. "In ospedale spesso arrivano codici rossi per ferite da arma da fuoco, da arma da taglio", aggiunge il collega. E con loro – spiegano – ci sono parenti, amici, spesso in evidente agitazione, per non dire altro. "Lasciare sguarnito il pronto soccorso in queste circostanze – osservano dei cittadini in attesa - mette tutti gli operatori in apprensione, ma anche chi viene per una visita, perché in quei casi si resta indifesi in balia del violento di turno".

Già ieri i pazienti e i loro parenti in attesa presso la sala antistante il pronto soccorso hanno potuto notare la novità. Molti quelli che hanno espresso apprezzamenti: "cosi ci sentiamo più protetti, mi è capitato di essere presente quando qualcuno protestava ad alta voce o pretendeva di entrare per primo. Cosi tutti si danno una calmata". Ma a tirare un sospiro di sollievo sono soprattutto i sanitari, infermieri, medici, oss, anche guardie giurate, anch'essi oggetto più volte di aggressioni e violenze.

Il drappello, dunque, parte tra luci e ombre, tra soddisfazione e delusione. Non è escluso, che dopo un periodo di prova e di verifica, il servizio possa trasformarsi in h24. Cosi come non è escluso che, anche sotto la pressione dei sindacati di polizia, si possa passare ad un potenziamento del personale presente ad ogni turno. Resta una certezza, il piano per un ripristino dei drappelli di polizia negli ospedali va avanti. Nuove postazioni sono già previste e saranno istituite a breve anche nei pronto soccorso dell'Ospedale Cardarelli, dell'Ospedale del Mare e dell'ospedale pediatrico Santobono.

Rea: «*Bene Pellegrini e Ospedale del Mare Ora acceleriamo dove manca*»

"Da anni chiediamo il ritorno delle forze dell'ordine nei presidi sanitari. Ci sono volute migliaia di aggressioni, d'infermieri feriti, umiliati, minacciati. Bene primo passo. Ma ora acceleriamo e portiamo sicurezza dove si cura". L'Ordine degli infermieri di Napoli è tra i primi a salutare positivamente il ritorno della polizia in ospedale. E ha già fatto pressione perché presto si estenda la presenza di agenti di polizia anche nelle altre strutture a rischio. Poi si deve pensare a migliorare i servizi, soprattutto nelle emergenze/urgenze. La ricetta Opi è semplice: innanzitutto garantire dotazioni di personale adeguati ai carichi di lavoro abbattendo attese, caos, e stress. Avere più infermieri in un pronto soccorso consente di dedicare più tempo al malato. Il rafforzamento delle misure di sicurezza consentirà di lavorare con minore stress. Infine, un cambio di passo nell'organizzazione: qui la parola d'ordine è 'cambiare in fretta i modelli organizzativi' "Gli infermieri svolgono un essenziale servizio di

pubblica utilità e solo per questo finora abbiamo garantito assistenza senza mai fermarci, anche operando in situazioni difficili, aggressioni e violenze comprese. Ma ora siamo allo stremo. Parole e promesse non bastano più. Ora a queste devono seguire i fatti".

Politica sanitaria

A rischio la sanità pubblica

Rapporto Crea 2023: "È allarme disuguaglianze. L'accesso universale alle cure è regre il 75,6% della spesa sanitaria totale, contro una media dell'82,9% nei paesi Ue. N

di PINO DE

Il servizio sanitario nazionale, equo, universale e solidale, cioè per tutti, è già defunto. Non lo si dice chiaramente, ma la crescente perdita di prestazioni, la carenza di personale e strutture, le lunghe liste d'attesa e alcuni numeri macro sulla spesa privata per cure da parte dei cittadini lo dicono chiaramente. Basta metterli insieme. E come dicono gli investigatori, tanti indizi fanno una prova. In più c'è il conforto di eminenti ricercatori, come quelli che hanno elaborato l'ultimo rapporto 'CREA Sanità 2023' che restituisce un'immagine preoccupante sull'equità dell'assistenza sanitaria: "L'accesso universale alle cure è regredito con la pandemia e non accenna a riprendersi. La spesa sanitaria del Ssn raggiunge il 75,6% della spesa sanitaria totale contro una media dell'82,9% nei paesi Ue e i cittadini hanno speso circa 41 miliardi di tasca propria per la sanità".

Gli investimenti - Tanto per cominciare diciamo subito che la spesa sanitaria pubblica nazionale nel 2019 è stata pari al 6,4% del Pil, una delle spese più basse in Europa e dei Paesi ricchi (in Germania è 9,8, in Francia 9,3, nei Paesi Bassi 8,4, in Belgio 8,1, in Austria 7,9, nel Regno Unito 7,9, negli USA 13,2). Con il covid la spesa sanitaria è arrivata a 7,3% del Pil, ma è stata solo una parentesi: il Governo Draghi aveva già previsto che la spesa doveva scendere al 6,3% nel 2023 e al 6,2% nel 2025 (cioè meno di quanto era nel 2019). Anche se l'Organizzazione Mondiale della Sanità invita gli Stati a non scendere mai sotto il 6,5%. Questi continui tagli alla Sanità hanno portato ad avere 3 posti letto ogni mille abitanti (la media Ocse è 4 e la Germania ne ha 8, l'Austria 7, la Francia 6), 6 infermieri ogni mille abitanti (la media Ue è 8 e la Germania ne ha 14, i Paesi Bassi 11, l'Austria 10).

Spesa privata - L'ultimo rapporto Oasi del Cergas Bocconi rileva che l'Italia rimane uno dei pochi Paesi in cui la spesa sanitaria diretta, cioè di tasca propria, supera quella «intermediata» da mutue e assicurazioni. La spesa sanitaria privata è in costante aumento. Ecco il trend degli ultimi anni: nel 2020 è stata di 43 miliardi, nel 2019 era di 39,5 miliardi, nel 2005 era di 25 miliardi. In media nel 2019 ogni italiano (bambini compresi) ha speso di tasca propria 640 euro per curarsi. Circa un 15% di tale cifra è servito per comprare "prodotti" che il SSN non passa perché inutili o di scarsa utilità, per fare accertamenti non necessari. Ma, "consumismo sanitario", a parte rimane il fatto che ogni italiano ha speso almeno 400 euro per cure necessarie che avrebbero dovuto essere fornite dal sistema sanitario nazionale (prestazioni diagnostiche, curative, riabilitative o preventive. E' come se ogni italiano avesse pagato un'ulteriore tassa di 400 euro (per una famiglia di 4 persone una tassa di 1.600 euro). Una tassa che ogni anno aumenta sempre più. Chi questo ulteriore salasso non ha potuto affrontarlo ha rinunciato a prestazioni sanitarie utili per ragioni economiche: il 7,9% degli italiani (circa 4 milioni) ha rinunciato ad almeno una prestazione prescritta (in maggioranza cure odontoiatriche). Ovviamente a rinunciare sono soprattutto i poveri e meno abbienti e i cittadini del Sud Italia (più poveri e con un servizio sanitario meno finanziato dallo Stato rispetto a quello del Nord).

Ssn in affanno - Ma Perché è così consistente la spesa dei cittadini per la salute e perché va aumentando? I motivi principali sono: 1) le lunghe attese per avere una prestazione. Per avere una visita oculistica in Italia si aspettano in media 88 giorni, per una ortopedica 56 giorni, per fare una colonscopia 96 giorni, per una gastroscopia 88 giorni, per un ecodoppler 74 giorni, per un ecocuore 70 giorni. Ma anche queste sono medie che nascondono la realtà: i tempi di attesa sono molto più lunghi al Sud che al Nord e, quindi, sono soprattutto i cittadini del Sud Italia che sono spinti a ricorrere alla sanità privata o a rinunciare a curarsi; 2) il ticket: se per avere una prestazione sanitaria dal Ssn si deve spendere poco meno di quanto si spende per andare da un privato, si favorisce la scelta di quest'ultimo.

, equa, universale e solidale

dito con la pandemia e non accenna a riprendersi. I costi per finanziare il Ssn toccano
el frattempo i cittadini hanno speso circa 41 miliardi di tasca propria per curarsi"

E MARTINO

Lea 2020, Sud sempre indietro

"Pagelle" regionali della Fondazione Gimbe: la Campania è ancora insufficiente. Target non raggiunto né per assistenza sul territorio, né per prestazioni ospedaliere. Restano enormi diseguaglianze tra nord e sud del Paese

(pdm) Tornano, dopo la pausa pandemica il monitoraggio dei Livelli essenziali di assistenza con i nuovi criteri, in versione riveduta e corretta, arrivati del post pandemia. Le nuove "pagelle" del Ministero della Salute, relative al 2020 promuovono solo 11 Regioni e al Sud c'è solo la Puglia tra quelle promosse anche ase, per l'anno della pandemia il nuovo sistema di valutazione sospende il giudizio ed è solo informativo a causa del Covid. Considerato che il Ministero della Salute non sintetizza in un punteggio unico la valutazione degli adempimenti Lea, la Fondazione Gimbe ha elaborato una classifica sommando i punteggi ottenuti nelle tre aree.

LA CAMPANIA - Di fatto la Campania resta, sia pure di pochissimo, tra le regioni insufficienti e soltanto sulla prevenzione supera la soglia minima. Su quella distrettuale (deputata al governo di ambulatori, medicina di famiglia e specialistica ambulatoriale) e, soprattutto, ospedaliera, invece riesce solo a sfiorare il punteggio minimo di 60 e paga pegno all'emergenza Covid che ha stravolto tutto, soprattutto nei sistemi più fragili (la Campania solo da fine 2019 è uscita dal commissariamento e continua il percorso di risanamento dei conti). Secondo fonti regionali la Campania, tuttavia, per il 2021 riagguanterebbe due sufficienze su tre (prevenzione e assistenza ospedaliera. mentre per il 2022 dovrebbe aver superato la soglia in tutti e tre gli ambiti di monitoraggio.

LE PAGELLE - Sino al 2019 lo strumento di valutazione era la cosiddetta "Griglia Lea", che dal 2020 è stata sostituita da 22 indicatori del Nuovo Sistema di Garanzia (Nsg). sempre suddivisi in tre aree: prevenzione collettiva e sanità pubblica, assistenza distrettuale ed assistenza ospedaliera. Per ciascuna area viene assegnato un punteggio tra 0 e 100 e le Regioni vengono considerate adempienti se raggiungono un punteggio pari o superiore a 60 in ciascuna delle tre aree; con un punteggio inferiore a 60 anche in una sola area la Regione viene classificata inadempiente. «Considerato che il 2020 è stato caratterizzato dall'emergenza pandemica – precisa il presidente di Gimbe Nino Cartabellotta – il monitoraggio dell'erogazione dei Lea è stato effettuato solo a scopo di valutazione e informazione, senza impatto sulla quota premiale». Più semplice la lettura dei dati offerta da Gimbe che dimostra che con la pandemia peggiorano quasi tutte le Regioni e la prevenzione paga il conto più salato. L'Emilia-Romagna guida la classifica delle migliori mentre la Calabria non si schioda dalla coda, posizione che ha assunto sin dal 2017. Restano comunque enormi diseguaglianze tra l'assistenza assicurata ai cittadini residenti nel nord del Paese e quelli che invece vivono nel sud il che la dice lunga su quello che accadrebbe con il progetto di autonomia differenziata privo di risorse aggiuntive per garantire i Lep (livelli essenziali di prestazioni) che in Sanità sono null'altro che i Lea.

IL MONITORAGGIO - Nel monitoraggio di Gimbe le Regioni vengono collocate in quattro aree: la prima delle pienamente promosse con un punteggio superiore a 242,4 che viene raggiunto nell'ordine, da Emilia Romagna (273,8), Toscana (261,1), provincia autonoma di Trento (259,6), Veneto (258,8) e Marche (245,7). Nel secondo gruppo identificato da un verde meno intenso ci sono invece le compagini che ottengono un punteggio tra 226,4 e 242,4 in cui si piazzano Piemonte, Lombardia, Friuli Venezia Giulia, Umbria e Lazio. Poi ci sono le regioni in giallo a ridosso della sufficienza con punteggio tra 177,9 e 226,3. Qui a guidare il gruppo c'è la Puglia, seguita da Liguria, Abruzzo, Valle d'Aosta e Sardegna. La Campania per un solo centesimo scivola con 177,8 nel gruppo delle rosse in compagnia della provincia autonoma di Bolzano, Sicilia, Molise, Basilicata e la Calabria. «Nonostante il maggior impatto della prima ondata pandemica nel Nord del Paese – commenta il Presidente – anche la nuova "pagella" conferma sia il gap Nord-Sud, visto che solo la Puglia si trova tra le 10 Regioni adempienti, sia le condizioni estremamente critiche della sanità in Calabria». Alcune Regioni si collocano in posizioni identiche nelle tre aree (Emilia-Romagna, Friuli Venezia Giulia, Lazio). Viceversa, altre Regioni occupano posizioni molto distanti.

Politica sanitaria

Campania in affanno,

Preoccupano i dati sulla mortalità e sulla fuga dei pazienti in strutture fuori regione. La Campani

di PINO DE

In Italia, secondo i dati Istat, al Sud si vive un anno e sette mesi in meno che al Nord. E, l'Istat pensiero dice pure che la Campania è la regione d'Italia che spende di più in migrazione sanitaria (3,4 miliardi in dieci anni nelle strutture del Centronord) con una flessione registrata solo durante la pandemia. Dati che confermano il malessere avvertito dai cittadini campani sul servizio sanitario regionale. Nel Mezzogiorno i flussi di pazienti in cerca di cura verso regioni diverse da quelle di residenza riguardano l'11,4% dei ricoverati a fronte del 5,6% dei residenti nel Nord-Italia. Oltre 1 miliardo all'anno per curare al Nord i cittadini del Sud, di cui circa un terzo a carico della Campania, per un esborso, dal 2012 al 2021, di oltre 11 miliardi, che diventano 14 se si aggiunge il Lazio.

L'autonomia - Se i «viaggi della speranza» sono il dato simbolo dell'arretratezza della sanità del Sud e delle difficoltà che sconta la Campania (al netto delle eccellenze che esistono ma ancora insufficienti a fare rete), la possibilità di un futuro riequilibrio tra nord e sud potrebbe essere definitivamente archiviato una volta che il progetto di autonomia differenziata venisse applicato. A meno di sostanziali modifiche della bozza fin qui approvata. E' il pensiero diffuso tra gli esperti, ma anche tra esponenti sindacali e politici di diversa estrazione. Dopo le aspre critiche pronunciate dal presidente della Regione Campania Vincenzo De Luca e la netta presa di distanza del governatore della Puglia Michele Emiliano, entrambi esponenti di forze di opposizione, anche il governatore

peggio con l'autonomia

a spende di più in migrazione sanitaria. Al Sud si vive un anno e sette mesi in meno che al Nord

E Martino

della Sicilia Renato Schifani di Forza Italia, pur con alcuni distinguo, ha sottolineato il suo «no a un'Italia a due velocità».

Azzerare le differenze – Prima di qualsiasi disegno autonomista, è necessaria una omogeneizzazione degli aspetti infrastrutturali ed economici del nostro Paese. Il dato di fondo è che tutto il Sud soffre da anni per qualità e accessibilità dei servizi sanitari.

Ma dopo la pandemia lo scoglio principale, nel Mezzogiorno in misura maggiore ma ovunque nel Paese, è diventato reclutare il personale che serve per presidiare le corsie sia nelle aree critiche dell'emergenza, sia per popolare Case e Ospedali di Comunità progettati con i fondi del Pnrr. Questi ultimi concepiti per decongestionare gli ospedali, ma privi di copertura per la spesa corrente e per gli stipendi dei camici bianchi. In questo scenario è chiaro che rendere autonome le Regioni anche nel differenziare gli stipendi di medici e infermieri diventerebbe una pietra tombale sul riequilibrio Nord-Sud e una nuova formidabile spinta a flussi migratori alimentati non più soltanto da malati ma anche da cervelli, medici, primari, specialisti, infermieri e tecnici di cui c'è oggi penuria ovunque. E' già grave la sottostima storica del fabbisogno di risorse per la Salute per garantire i Lea. Qui la Campania è ultima per assegnazione delle risorse pro capite, nonostante sia la terza in Italia per quota di popolazione residente.

Rea: *«C'è il serio rischio che le distanze crescano ancora»*

(pdm) - "Se si avvantaggiano di più le Regioni che già da tempo stanno più avanti è quasi superfluo sottolineare il pericolo che invece di procedere verso un sostanziale riequilibrio le diseguaglianze aumenteranno ancora di più". Intervistata da un giornalista del Roma, Teresa Rea, presidente dell'Ordine delle professioni infermieristiche di Napoli guarda con preoccupazione a quanto potrebbe accadere, soprattutto nella sanità, ma non solo, con il varo definitivo della riforma sull'autonomia differenziata. Anche alla luce dei dati emersi dal report della Corte dei conti sulla migrazione sanitaria.

D **Una fotografia impietosa quella scattata dalla Corte dei conti**

R "Si. E se non si pone un argine al fenomeno del marketing sanitario, figlio degenere d'una sanità a più velocità, la fuga al Nord dei pazienti campani non potrà che crescere".

D **Una previsione pessimistica la sua, presidente.**

"No, direi realistica. E' come un serpente che si morde la coda: più danari incassano le Regioni benchmark, migliore sarà il servizio sanitario offerto, diventando sempre più attraenti. Al contrario, le Regioni sanitariamente più povere continueranno a depauperarsi per pagare i costi dell'assistenza fuori regione".

D **Ma la Campania già incassa meno di altre regioni dal fondo sanitario nazionale.**

R "Già, pur denunciando una serie di emergenze mai considerate nei criteri di riparto. Con meno denari in cassa, la Campania, già oggi in crisi per mancanza di infermieri e personale sanitario in genere, senza una rete territoriale adeguata, con un deficit enorme che riguarda infrastrutture, tecnologie, organizzazione e gestione, arretrerà ancora di più nei livelli essenziali di assistenza e nella qualità complessiva dell'offerta sanitaria".

D Come se ne esce?

R "Con un fronte comune di professionisti, istituzioni, cittadini, contro chi guarda alla sanità come un business. Ho la sensazione che siano in tanti a guardare con favore ad una maggiore presenza del privato a discapito del pubblico. Noi infermieri staremo sempre dalla parte del cittadino e di un sistema sanitario nazionale, equo, sostenibile e universalistico".

Politica sanitaria

Gimbe: “Con l’autonomia differenziata colpo di grazia al Ssn”

Il presidente della Fondazione Gimbe, **Nino Cartabellotta** ha lanciato per primo l’allarme: «Con questo disegno di legge si darà il colpo di grazia al Servizio Sanitario Nazionale e aumenteranno le diseguaglianze regionali, legittimando normativamente il divario tra Nord e Sud, violando il principio costituzionale di uguaglianza dei cittadini nel diritto alla tutela della salute». In un approfondito rapporto, la Fondazione osserva e avverte quali potrebbero essere le conseguenze per la sanità di un processo di progressiva frammentazione regionale delle regole e delle competenze: “non prevedendo risorse per finanziare i livelli essenziali delle prestazioni (LEP) e consentendo il trasferimento delle autonomie alle Regioni prima senza recuperare i divari tra le varie aree del Paese”.

Più gap - Fa notare Cartabellotta, “la richiesta di maggiori autonomie viene proprio dalle Regioni che fanno registrare le migliori performance nazionali in sanità”. Infatti, dalla fotografia sugli adempimenti al mantenimento dei LEA relative al decennio 2010-2019 emerge che le tre Regioni che hanno richiesto maggiori autonomie si collocano nei primi 5 posti della classifica, rispettivamente Emilia Romagna (1a), Veneto (3a) e Lombardia (5a), mentre nelle prime 10 posizioni non c’è nessuna Regione del Sud e solo 2 del Centro (Umbria e Marche). Inoltre, aggiunge Cartabellotta, l’analisi della mobilità sanitaria conferma la forte capacità attrattiva delle Regioni del Nord, cui corrisponde quella estremamente limitata delle Regioni del Centro-Sud, visto che nel decennio 2010-2019, tredici Regioni, quasi tutte del Centro Sud, hanno accumulato un saldo negativo pari a € 14 miliardi. E che tra i primi quattro posti per saldo positivo si trovano sempre le tre Regioni che hanno richiesto le maggiori autonomie: Lombardia (+€ 6,18 miliardi), Emilia-Romagna (+€ 3,35 miliardi), Toscana (+€ 1,34 miliardi), Veneto (+€ 1,14 miliardi). Al contrario, le cinque Regioni con saldi negativi superiori a € 1 miliardo sono tutte al Centro-Sud: Campania (-€ 2,94 miliardi), Calabria (-€ 2,71 miliardi), Lazio (-€ 2,19 miliardi), Sicilia (-€ 2 miliardi) e Puglia (-€ 1,84 miliardi).

Ventuno sistemi - “Questi dati – osservano gli analisti di Gimbe - confermano che nonostante la definizione dei LEA dal 2001, il loro monitoraggio annuale e l’utilizzo da parte dello Stato di strumenti quali Piani di rientro e commissariamenti, persistono inaccettabili diseguaglianze tra i 21 sistemi sanitari regionali, in particolare un gap strutturale Nord-Sud che compromette l’equità di accesso ai servizi e alimenta un’imponente mobilità sanitaria in direzione Sud-Nord”. Di conseguenza, questa la tesi di Gimbe: “l’attuazione di maggiori autonomie in sanità, richieste proprio dalle Regioni con le migliori performance sanitarie e maggior capacità di attrazione, non potrà che amplificare le inaccettabili diseguaglianze registrate con la semplice competenza regionale concorrente in tema di tutela della salute”. “Tenendo conto della grave crisi di sostenibilità del SSN e delle imponenti diseguaglianze regionali – conclude Cartabellotta – la Fondazione GIMBE invita il Governo a mettere da parte posizioni sbrigative e propone in prima istanza di espungere la tutela della salute dalle materie su cui le Regioni possono richiedere maggiori autonomie. In subordine, chiede che l’eventuale attuazione del regionalismo differenziato in sanità venga gestita con estremo equilibrio, colmando innanzitutto il gap strutturale tra Nord e Sud del Paese, modificando i criteri di riparto del Fabbisogno Sanitario Nazionale e aumentando le capacità di indirizzo e verifica dello Stato sulle Regioni.”.

“Formare i formatori” Corso di didattica per docenti

Se c’è un tema su cui spinge forte l’Ordine delle professioni infermieristiche di Napoli questo è quello della competenza professionale, della formazione e dell’aggiornamento. Una mission che sta molto a cuore alla Presidente Teresa Rea, forse anche per l’importante ruolo che da anni svolge all’Università Federico ll di Napoli.

La strategia - Si vuole portare l’infermiere a competere sul piano delle conoscenze con le figure professionali più preparate in termini di competenze cliniche e assistenziali. Anche perché, il futuro della professione infermieristica passa solo attraverso una sempre maggiore preparazione accademica e post laurea. Per fare questo servono due elementi essenziali: studenti disciplinati, con la giusta vocazione e il forte impegno verso lo studio e la ricerca; e Ma docenti preparati, adeguatamente aggiornati, non solo sulle materie tecniche, ma anche pedagogiche e psicologiche, per meglio trasferire il materiale didattico. Nasce con questa finalità il progetto ‘formare i formatori’, giornate di studio dedicate ai docenti variamente impegnati. Un concetto che la presidente ha ben sintetizzato nel suo discorso di presentazione: “La formazione e l’aggiornamento professionale sono una parte importante della nostra attività ordinistica. Riteniamo siano gli strumenti fondamentali per garantire la formazione continua finalizzata a migliorare le competenze e le abilità cliniche, tecniche e manageriali e a supportare i comportamenti dei professionisti sanitari, con l’obiettivo di assicurare efficacia, appropriatezza, sicurezza ed efficienza all’assistenza prestata dal Servizio Sanitario Nazionale in favore dei cittadini**”**.

Il Corso - Ecco perché l’Ordine delle professioni infermieristiche di Napoli ha chiesto alla Società italiana di Pedagogia Medica (Sipem) di organizzare un corso sul tema ‘Formazione di Formatori’. L’idea nasce da alcune semplici domande che i vertici dell’Ordine si sono posti. Come imparano gli adulti? E come e quando si formano i formatori? Con questo corso s’intende quindi avviare un programma di aggiornamento didattico indispensabile per formare le nuove leve della professione stando al passo con i tempi. Si tratta di una due giorni full immersion (sei ore al giorno) rivolta ai docenti d’Infermieristica dei Corsi di Laurea e dei Corsi di educazione continua in medicina, Ecm. Due giornate di studio per approfondire e aggiornare la didattica di chi forma, anche alla luce di moderne tecniche d’approccio. Alla fine del corso i partecipanti saranno in grado di descrivere i principi pedagogici fondamentali su cui si basa la didattica universitaria e per professionisti; progettare le attività formative d’aula in accordo con i principi teorici; usare i casi clinici per l’apprendimento delle abilità di ragionamento clinico; usare il Problem Based Learning per sviluppare le capacità critiche e di autoformazione; valutare l’apprendimento attraverso i casi clinici.

OpiNapoli informa

ASSEMBLEA

L'Opi Napoli traccia il su

Passano all'unanimità dei presenti il Conto consuntivo e q anche la rendicondazione non economica. Rea: «Un

di **Pino De**

Non solo numeri e aride cifre incolonnate entro un sistema di entrate e uscite. Ma anche concetti moderni come rendicondazione sociale, mission, vision. Il tutto corroborato da speciali focus illustrati con istogrammi, grafici e tabelle. Un insieme che ci dice cosa ha fatto l'Ordine delle professioni infermieristiche di Napoli nel corso dell'anno in termini di attività economica, ma anche sociale e di governance. Si è arricchita quindi di tutto questo l'annuale assemblea degli iscritti.

La Relazione - La sala centrale dell'Hotel Serapide di Pozzuoli era piena quando la presidente Teresa Rea ha preso la parola: «Oggi per la prima volta oltre ai numeri che sono sempre in ordine, come ben ci diranno il tesoriere e i revisori, presentiamo anche un bilancio sociale della nostra attività. Cioè diamo conto ai nostri iscritti di che cosa abbiamo realizzato nel corso dell'anno (mission) e cosa intendiamo fare per il

Enti sostenibili e rendicondazione non economica

Quella della rendicontazione aziendale degli aspetti non finanziari legati alla sostenibilità è una questione ormai all'ordine del giorno nelle priorità delle aziende e degli enti statali. Non a caso, è in costante aumento il numero delle società che stilano un bilancio di sostenibilità, spesso anche in maniera volontaria quando non obbligate dall'attuale legislazione. Siamo oggi sempre più vicini all'approvazione della direttiva europea CSRD (Corporate Sustainability Reporting Directive) che indicherà le misure da seguire nella stesura della documentazione di rendicontazione delle attività aziendali e normerà il sistema del reporting in merito agli aspetti ambientali, sociali e di governance (ESG). La direttiva, che si baserà sugli standard comuni europei di rendicontazione della sostenibilità (ESRS) andrà a sostituire l'attuale NFRD (Non Financial Reporting Directive) in vigore dal 2014 e interesserà, a partire dal 2024, oltre 50.000 aziende, rispetto alle 12.000 attuali. Ma cos'è il bilancio di sostenibilità? Si tratta di un documento di rendicontazione nel quale un'impresa o un ente comunica la propria performance ESG (***Environmental, Social, Governance)*** e gli eventuali progressi effettuati in ambito ambientale, sociale e di governance. Per decidere come rendicontare gli aspetti legati alla sostenibilità le aziende hanno due opportunità: stilare un report integrato dove gli aspetti non finanziari sono contenuti nello stesso documento di quelli finanziari, oppure separare le informazioni e pubblicare a parte una dichiarazione non finanziaria ossia il bilancio, appunto, di sostenibilità. In Italia il decreto legislativo con cui è stata recepita la direttiva del 2014, e che stabilisce le regole da seguire nella redazione del bilancio di sostenibilità, è il **Dlgs. 254/2016**. Secondo quanto definito dal decreto, il documento dovrà contenere almeno informazioni relative all'utilizzo di risorse energetiche, distinguendo fra quelle prodotte da fonti rinnovabili e non rinnovabili, e all'impiego di risorse idriche; alle emissioni di gas ad effetto serra e inquinanti in atmosfera; all'impatto, ove possibile sulla base di ipotesi o scenari realistici anche a medio termine, sull'ambiente nonché sulla salute e la sicurezza, associato ai fattori di rischio. Dovranno poi essere rendicontati gli **aspetti sociali e attinenti alla gestione del personale**, incluse le azioni poste in essere per garantire la **parità di genere**, le misure volte ad attuare le convenzioni di organizzazioni internazionali e sovranazionali in materia, e le modalità con cui è realizzato il dialogo con le parti sociali; le informazioni riguardanti il rispetto dei **diritti umani**, le misure adottate per prevenirne le violazioni, nonché le azioni poste in essere per impedire atteggiamenti ed azioni comunque discriminatori; infine informazioni riguardanti la **lotta contro la corruzione** sia attiva sia passiva, con indicazione degli strumenti a tal fine adottati.

A ANNUALE

uo primo bilancio sociale

uello di previsione dell'Ente. Presentata per la prima volta
momento importante di democrazia partecipativa».

MARTINO

prossimo (vision), tenuto conto del ruolo ascritto agli ordini provinciali degli infermieri in qualità di enti sussidiari dello Stato ben definiti nell'articolo 32 della Costituzione». Nell'annunciare a breve la pubblicazione del bilancio, sia economico che sociale sul sito dell'ordine, la Presidente ha illustrato alla platea in un rapido excursus i temi principali su cui si articolerà l'impegno dell'ordine: a) assicurare agli infermieri una formazione adeguata; b) potenziare i corsi gratuiti per l'aggiornamento e il perfezionamento delle competenze; c) promuovere l'aggiornamento dei modelli organizzativi desueti; d) attuazione del Pnrr e della sanità territoriale; e) spazio etico e rispetto del codice deontologico.

I conti – Dalla relazione letta dal tesoriere Gennaro Sanges emerge un dato su tutti: grazie alla tenace attività di recupero delle quote d'iscrizione non riscosse è stato possibile registrare un avanzo di gestione di 71mila euro, ma soprattutto di spegnere molto prima il mutuo acceso per l'acquisto della sede. «E' un sogno che si realizza», dice soddisfatto Gennaro Sanges. «In tempi record abbiamo recuperato la somma necessaria per estinguere definitivamente il mutuo, con un risparmio di circa 70mila euro di interessi passivi. Con questo risultato possiamo dire che lo stabile di piazza Carità è già da ora degli infermieri di Napoli». Sulla bontà dei conti economici si è poi soffermato il presidente dei revisori dei conti, il Paolo Longoni. «Come presidente dei revisori esprimo un giudizio largamente positivo sul bilancio e sullo stato dei conti in genere, sottolineando la giusta e doverosa attività di riscossione delle quote».

Il voto – Il giudizio finale sul bilancio consuntivo e su quello di previsione lo hanno infine espresso i delegati presenti. Per il primo si sono registrati 285 voti a favore, nessun astenuto e nessuno contrario. Per il bilancio di previsione hanno votato a favore 307 delegati, nessun contrario, nessun astenuto.

OpiNapoli informa

"La responsabilità infermieristica: tutela del professionista sanitario"

Giornata di formazione promossa da Opi Napoli e Asl Napoli 3 Sud

di Peppe Papa

Foto: a sinistra Elvira Bianco, direttrice sanitaria Asl Na 3 Sud. A dx IL team di moderatori e relatori

Si è tenuta a Boscotrecase, nel Presidio Ospedaliero S. Anna & SS. Madonna della Neve, la giornata di formazione dedicata alla "Responsabilità infermieristica: la tutela del professionista sanitario". "Un'occasione importante per approfondire il tema della sicurezza nell'assistenza e per migliorare le competenze di ruolo e la consapevolezza delle responsabilità nei processi assistenziali", come hanno sottolineato la direttrice sanitaria aziendale Elvira Bianco e Rosaria Comito (Servizio formazione aziendale) nel loro indirizzo di saluto.

Circa 120 i partecipanti, divisi tra infermieri e infermieri pediatrici, provenienti dai distretti sanitari e presidi ospedalieri dell'Asl Napoli 3 Sud. Il corso è stato organizzato grazie al protocollo d'intesa stipulato nel 2022 tra l'Opi di Napoli e l'Asl Napoli 3, con l'obiettivo di rafforzare il rapporto di collaborazione istituzionale tra l'Azienda sanitaria locale e l'Ordine delle professioni infermieristiche di Napoli. Un progetto finalizzato alla promozione di momenti formativi di spessore orientati allo sviluppo delle conoscenze, seguendo l'evoluzione scientifica, tecnologica e dei nuovi modelli organizzativi in atto nella sanità pubblica. Al centro del dibattito, la Legge 24/2017 sulla responsabilità professionale del personale sanitario. La cosi detta "Legge Gelli", che riforma la responsabilità professionale con risvolti sia in ambito civile che penale. Ma con obiettivo preciso: riportare equilibrio e fiducia tra il sanitario e il paziente.

La prima sessione è stata moderata da Margherita Ascione (consiglio direttivo Opi Napoli) e da Umberto Vitiello (commissione formazione Opi Napoli). Nel suo intervento Aniello Lanzuise (vicepresidente OPI Napoli) si è soffermato sugli elementi cardini della legge 24/2017. L'avvocato Eduardo Riccio (consulente legale dell'ordine) ha focalizzato l'attenzione sulla responsabilità penale e la responsabilità professionale in campo sanitario, approfondendo il concetto di colpa dal punto di vista giurisprudenziale. Nela seconda sessione, moderata da Luigi Amato (commissione formazione Opi Napoli) e Concetta Pane (revisori dei conti Opi Napoli) da sottolineare la relazione di Vincenzo Signoriello (presidente commissione albo infermieri Opi Napoli) che ha informato i partecipanti sul profilo professionale dell'infermiere con lo sviluppo di alcune aree specialistiche. Maria Grimaldi (presidente commissione albo infermieri pediatrici Opi Napoli) ha tenuto la relazione conclusiva soffermandosi sul profilo professionale dell'infermiere pediatrico con lo sviluppo di alcune aree specialistiche e sulle attività della commissione d'albo degli infermieri pediatrici.

Vincenza Sansone nuova ricercatrice Med/45

Rea: *"Plauso alla collega. Bene impegno Ateneo"*

L'Università Luigi Vanvitelli di Napoli ha una nuova ricercatrice Med/45. "Alla dottoressa Vincenza Sansone vanno i complimenti e gli auguri più sentiti dei vertici dell'Ordine delle professioni infermieristiche di Napoli, dell'intera comunità professionale che rappresento e i miei personali. Un grande traguardo professionale che auspichiamo sia il primo di una lunga serie e che accogliamo con soddisfazione. Poter annoverare un nuovo ricercatore tra le nostre fila significa arricchire l'intera professione. Significa fare un altro importante passo in avanti sulla strada delle competenze, della ricerca scientifica e della formazione. A testimonianza di un crescente percorso formativo, di studio e di lavoro che la nostra famiglia professionale sta compiendo in questi ultimi anni". Cosi Teresa Rea, Presidente dell'Ordine delle Professioni infermieristiche di Napoli, dopo la pubblicazione del Decreto da parte dell'Università degli studi della Campania Luigi Vanvitelli, con il quale si è conferita alla dottoressa Sansone il ruolo di ricercatrice a tempo determinato (tipologia A) presso il Dipartimento di Medicina Sperimentale. Il decreto, a firma del Magnifico Rettore Giovanni Francesco Nicoletti, sottolinea che la selezione riguarda il settore scientifico/disciplinare Med/45, ovvero Scienze infermieristiche Generali, Cliniche e Pediatriche. "Un sentito ringraziamento da parte dell'Opi Napoli e mio personale – ha aggiunto la presidente Rea - va al Magnifico Rettore, professor Giovanni Francesco Nicoletti e al Decano del macrosettore scientifico professionale, professor Italo Francesco Angelillo, per la loro riconosciuta opera di difesa e promozione dell'attività scientifica e didattico-formativa legate al settore disciplinare Med/45".

Interventi laparoscopici del giunto gastroesofageo

di Salvatore Errico

Il trattamento chirurgico del reflusso gastroesofageo(RGE) negli ultimi 25 anni ha conosciuto un'importante evoluzione. L' efficacia del trattamento medico, associato alle sequele e alle complicanze osservate anche in chirurgia laparoscopica, ha portato ad una riduzione delle indicazioni chirurgiche. D 'altra parte, una più approfondita conoscenza dei meccanismi fisiologici alla base della continenza cardiale, ha permesso di perfezionare interventi antireflusso al passo con le più recenti acquisizioni fisiologiche. In ogni caso, laddove esistono indicazioni rigorose (ernie iatale para-esofagea, ernia iatale con reflusso sintomatico, Barrett esofagite di II –III grado), il perfezionamento della tecnica laparoscopica , ha permesso alla chirurgia miniinvasiva di diventare il gold standard anche nel trattamento della mRGE, raggiungendo tassi di successo nelle varie casistiche superiori al 90%. Tutti i pazienti affetti da mRGE o da ernia iatale che rispondono bene alla terapia medica con inibitori dell'acidità gastrica e con procinetici da circa 6 mesi, ma che ripresentavano sintomi alla sospensioni di questa,

possono essere candidati all'in10-12tervento di fundoplicatio dopo aver eseguito una serie di esami tra i quali ricordiamo la esofagogastroduodenoscopia, un Rx con bario del primo tratto doigestivo, una manometria esofagea ed una PHmetria nelle 24 ore. Qualora questa serie di indagini dimostrano una insufficienza funzionale del LES (sfintere esofageo inferiore). Il nostro centro U.O.C. di Chirurgia mini-invasiva e robotica dell'A.O. dei Colli presidioMonaldi di Napoli diretta dal professore Diego Cuccurullo, rappresenta uno dei centri pilota e di riferimento sulla chirurgia laparoscopica del giunto gastro esofageo. L'intervento viene effettuato in anestesia generale con tecnica mini-invasiva, mediante cinque piccole incisioni (0,5-1 cm) e l'introduzione di trocars che rappresentano le vie di accesso. Il protocollo adottato presso il nostro centro negli interventi laparoscopici sul giunto gastro-esofageo è rappresentato da:

Preparazione preoperatoria

Il paziente è tenuto a dieta 24 ore prima dell'intervento in quanto spesso,soprattutto nelle forme avanzate, sono presenti residui alimentari.

Posizione del paziente

Il paziente è in posizione litotomica con arti inferiori divaricati all'altezza del tronco,braccio destro lungo il corpo, braccio sinistro abdotto a 90°,letto operatorio con possibilità di anti-trendeleburg fino 30° e lateralità fino a 25° e posizionato sondino naso gastrico.

Posizione degli operatori e dello strumentario di sala operatoria

L'operatore si posiziona tra le gambe del paziente, alla sua sinistra il primo aiuto,che manovra l'ottica e con il secondo aiuto alla sua destra che e' responsabile del sollevamento del fegato sempre a destra se è possibile ci sarà un terzo aiuto. Lo strumentista è posto a destra dell'operatore all'altezza delle gambe del paziente. La colonna laparoscopica si trova alla sinistra del paziente all'altezza della testa (**Fig. A).**

Posizione dei trocars

Il primo trocars, per l'ottica, da 10-12 mm è posizionato qualche centimetro al di sotto del punto di mezzo tra apofisi xifoidea e ombelico, il secondo trocar 10-12 mm è posto tra la emiclaveare e la ascellare anteriore sinistra al di sotto dell'arco costale, il terzo trocar da 5 mm è posizionato al di sotto dell'apofisi xifoidea in posizione paramediale destra, il quarto trocar da 5 mm è posto a livello della ascellare anteriore sotto il margine costale di destra. Il quinto trocar da 5 mm viene posto all'altezza della emiclaveare sinistra, sulla ombelicale trasversa (**Fig. B**).

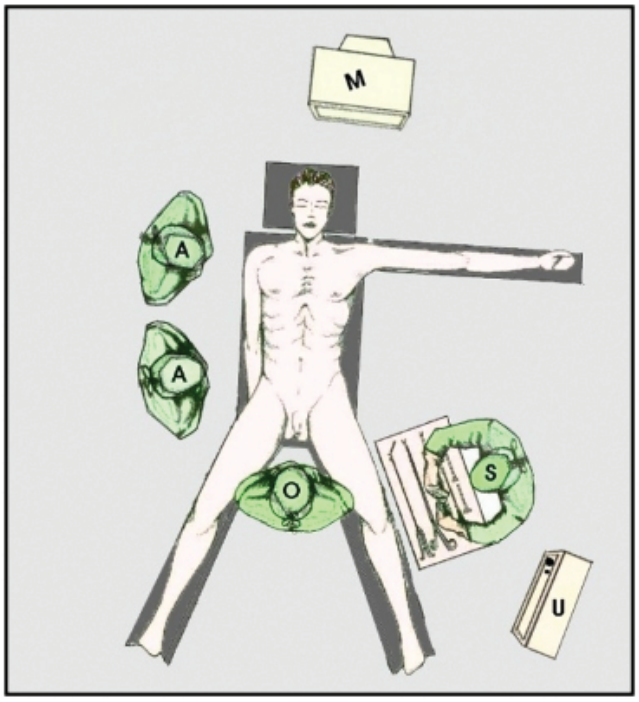


Fig. A - **Posizione paziente, operatori e monitor**

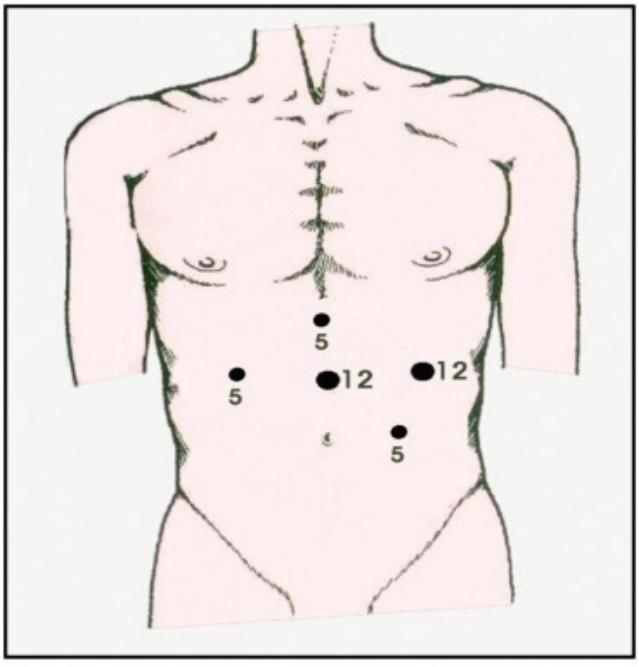


Fig. B - **Siti d'ingresso dei trocars**

Strumentario laparoscopico:

	Diametro	Quantità
Siringa con 2cc sol. fisiologica		
Ago di Veress		n°1
Hasson	10-12mm	n°1
Trocar Fig. B	10-12mm	n°2
Trocar	5mm	n°2
Johann	5mm	n°2
Grasper	5mm	n°1
Cistico (passafilo)	10mm	n°1
Videoendoscopio 30°	10-12mm	n°1
Forbice ultrasonic armonic Ace	5mm	n°1
Pinza bipolare (Mouiel)	5mm	n°1
Portaghi x laparoscopia	5mm	n°1
Cannula x aspirazione e irrigazione	5mm	n°1
Divaricatore a branche multiple	10mm	n°1

Presidi:

Cavo luce.
Cavo x telecamera o copricavo sterile.
Cavo x elettrobisturi.
Tubo x insufflazione.
Tubo x aspirazione e irrigazione.
Soluzione fisiologica x irrigazione
Soluzione sterile calda (ottica).
Sonda luminosa con terminale sterile inter-cambiabile 50 french : (Nissen)

Materiale sanitario: -
Garze 10x60 cm
-Lunghette 12x2,5cm

Ferri chirurgici per approccio laparoscopico:

Pinza anatomica	n°2
Manico da bisturi lama11	n°1
Forbice media-curva (Metzenbaum)	n°1
Portaghi	n°2
Klemmer curvi	n°2
Kocher curvi	n°4
Pinza ad anelloi	n°1
Divaricatore di Langebeck	n°2
Pinza x pulizia	n°1
Backhaus	n°4
Coppetta	n°2

SUturatrici metalliche:

Endoclip	10mm	ML

Suture:

Fettuccia 12cm
Sutura sint. assorbibile.
(acido poliglicolico)
Cal.0 ago 5/8
Cal.3/0 ago 3/8

Sutura non assorbibile.
, (poliestere o poliammide)Ethibond
Cal.2/0 ago composite

Note di tecnica chirurgica

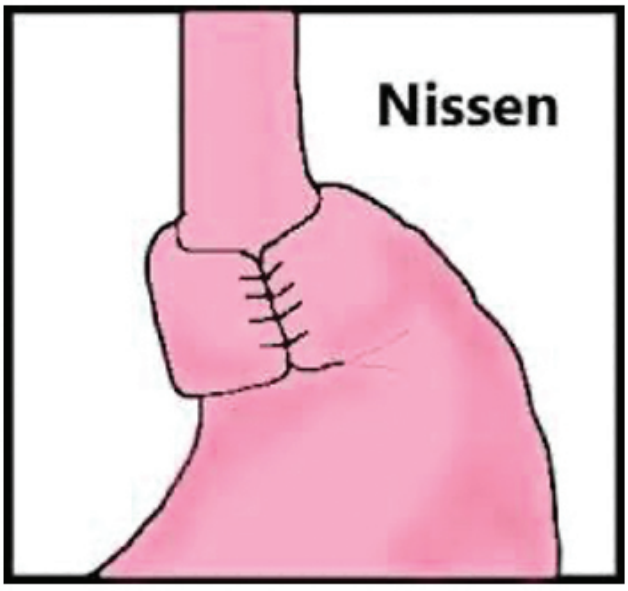
Pneumoperitoneo open-veress-assistito. Mobilizzazione del pilastro di sinistra e del fondo gastrico. Successiva mobilizzazione del pilastro di destra. **Iatoplastica** con punti staccati in poliestere (**Ethibon 2/0**). In caso di difficoltà di iatoplastica , con sfiaccamento dello iato come avviene nelle grosse ernia iatale, vi è la possibilità di posizionare una protesi. In passato abbiamo preferito protesi non riassorbibili,tipo **Crurasoft** in **PTFE** fissate con punti non riassorbibili e tacker. A distanza di tempo si sono registrate complicanze relative a migrazioni di tale protesi nel lume esofageo o gastrico. In questi pazienti è stato necessario il reintervento con resezione gastrica secondo IvorLewis. Per tale motivo oggi in questi casi si preferisce una protesi biologica **(Bio A 7x10) Fig.C** fissata con con spiraline in materiale assorbibile (**Securestrep**) o punti staccati in acido poliglicolico .

Fig. C - **Protesi BIO A per ernie iatali o diaframmatiche**

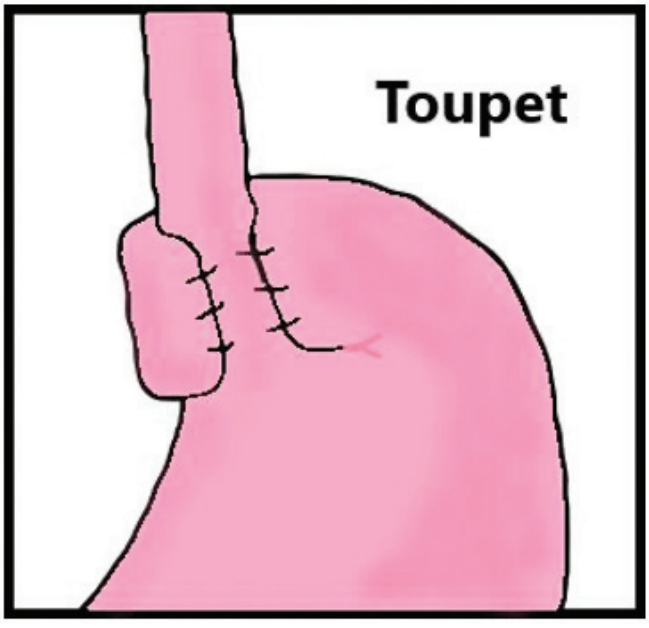
Fig. D - **Securestrep**

Le tecniche chirurgiche di plastica antireflusso eseguite presso il nostro centro sono:

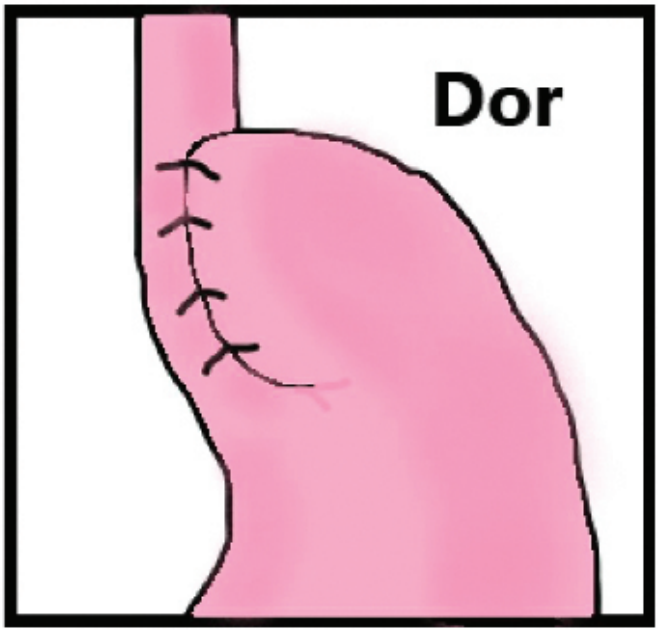
- **La Fundoplicatio sec.Nissen**che prevede la creazione con il fondo gastrico di una valva antireflusso che circonda l'esofago addominale di 360°.



- **La Gastroplastica sec. Toupet** che prevede invece la creazione con il fondo gastrico di una emivalvaantireflussoadi 270° che viene fissata sui margini destro e sinistro dell'esofago.



- **La Gastroplastica sec. Dor** Si basa sulla sutura di un'emivalva anteriore del fondo gastrico a 180° ed un tipo di tecnica utilizzata in associazione all'intervento di acalasia (disordine cronico della motilità esofagea,caratterizzato da un mancato rilasciamento dello sfintere esofageo che provoca un ostacolo al transito del bolo alimentare).



Decorso post-operatorio

Non sono previsti drenaggi addominali. Non è necessario rimuovere i punti di sutura perché le ferite sono chiuse con sutura intradermiche riassorbibili e con minicerotti di accostamento (steristrip). In prima giornata può essere ripresa l'alimentazione liquida e dalla seconda giornata un'alimentazione semiliquida per consentire un progressivo adattamento funzionale fino alla ripresa dell'alimentazione normale. In relazione al tipo di fundoplicatio si può avere, infatti, una difficoltà nell'ingestione dei cibi soprattutto solidi, per cui è consigliabile seguire anche dopo la dimissione una dieta secondo un accurato schemache prevede cinque o sei pasti frazionati nella giornata e le pietanza devono essere semiliquide e tiepide.

La colazione:

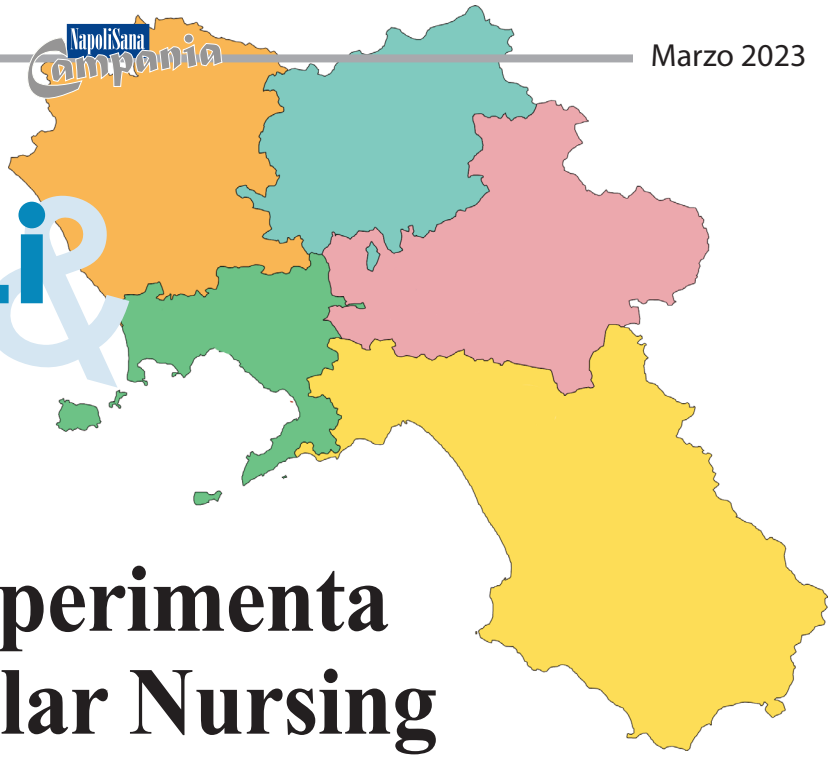
Latte, orzo, the', camomilla o latte di soia.
Biscotti plasmon o fette biscottate a pappina.
Zucchero o miele.
Frullati di frutta.
Yogurt
Uova a zabaione o coque.

A pranzo e cena:

Pastina glutinata primi mesi in brodo vegetale.
Carne o pesce omogeneizzato o liofilizzato o ben macinato.
Formaggi molli e freschi.
Frutta premuta o frullata.

Il paziente viene dimesso in terza giornata con consigli di eseguire tale per circa 4 settimane.

Ospedali & territorio



Al Moscati si sperimenta modello Modular Nursing

AVELLINO – Infermieri sugli scudi al Moscati di Avellino. Una riorganizzazione del Pronto soccorso basata su un modello di assistenza modulare è partita il primo marzo, in via sperimentale. Un progetto, proposto dalla Direzione medica di Presidio e approvato dal management dell'Azienda ospedaliera San Giuseppe Moscati di Avellino, per cercare di migliorare il flusso e la gestione dei pazienti nel reparto di emergenza attraverso un'ottimizzazione delle risorse infermieristiche. Terminata la fase di formazione del personale, alla definizione di specifici compiti agli infermieri e agli operatori socio-sanitari assegnati al pronto soccorso. Il modello modular nursing, nello specifico, prevede l'assegnazione di personale per ogni codice di ingresso attribuito al triage ai pazienti. I sette infermieri e i 3 Oss di ogni turno saranno distribuiti a gruppi nei percorsi individuati per ciascuno dei cinque codici di priorità e saranno responsabili di determinate procedure, facendosi carico del paziente da tutti i punti di vista e collaborando in maniera diretta con il bed-manager sotto diversi aspetti: dall'agevolazione del turn-over verso le unità operative in caso di ricovero, alla comunicazione con i familiari, alla gestione dei rapporti con la Farmacia ospedaliera. Un riordino delle procedure e della fruizione degli spazi tramite un lavoro coordinato, multidisciplinare e trasversale, che dovrebbe ridurre attese e tempi di permanenza, migliorare l'accoglienza e personalizzare i piani assistenziali, nonché garantire una maggiore sicurezza al paziente e agli operatori sanitari. «Si tratta di una delle iniziative che saranno messe in campo per decongestionare il Pronto soccorso - dichiara il Direttore Sanitario Rosario Lanzetta -. Con il progetto basato sul modular nursing, l'infermiere diventa la professionalità fondamentale per gestire i flussi dei pazienti, acquisendo una maggiore autonomia e responsabilità, con una più giusta valorizzazione del suo ruolo. La fase di sperimentazione del progetto sarà costantemente monitorata - conclude Lanzetta - attraverso diversi strumenti di misurazione. Se i risultati raggiunti saranno in linea con quelli attesi, si potrà prendere anche in considerazione di applicare in altre Unità operative aziendali il modello di lavoro basato su nuovi assetti organizzativi».

"Terapia del dolore"' all'Ospedale del Mare

NAPOLI - Un nuovo ambulatorio per la Terapia del Dolore ha aperto i battenti all'Ospedale del Mare. A partire dal 1 marzo, i pazienti affetti da dolore cronico possono infatti rivolgersi al servizio ambulatoriale del presidio dell'Asl Napoli 1 Centro. Il nuovo ambulatorio (oltre ad occuparsi dei pazienti ricoverati nel presidio ospedaliero di Ponticelli) è aperto a tutti i cittadini, affiancando così gli altri centri hub e spoke già esistenti sul territorio regionale. «In questo modo - spiega una nota dell'azienda sanitaria locale - i pazienti già ricoverati, come i malati oncologici, potranno essere seguiti sia durante il ricovero sia dopo la dimissione dal nosocomio. Un percorso che può offrire loro la migliore gestione terapeutica, specifica per ogni singolo paziente, garantendo il controllo ottimale del dolore e, di conseguenza, anche una migliore qualità della vita». L'ambulatorio afferisce all'unità operativa complessa di Anestesia e Rianimazione. «L'obiettivo che ci siamo posti - spiega il direttore generale dell'Asl Ciro Verdoliva - è quello di offrire un 'Percorso del Dolore' all'interno dell'ospedale stesso. In questo modo, il paziente può essere seguito in maniera multidisciplinare, usufruendo di tutte le consulenze e approfondimenti diagnostici necessari ad un trattamento globale della patologia. Un passo in più per offrire ai cittadini servizi e assistenza di qualità». «Il percorso - prosegue l'Asl - è organizzato in modo tale da realizzare una presa in carico globale, che vede il paziente al centro. I pazienti provenienti dal territorio regionale vengono infatti presi in carico da un singolo specialista che diviene per loro una figura di riferimento e che valuta la patologia nella sua complessità, proponendo le migliori strategie diagnostico-terapeutiche».

Tumori, due proteine per prevenire il cancro

NAPOLI - Importante scoperta dei ricercatori napoletani del Tigem di Pozzuoli che apre concretamente la strada alla messa a punto di nuovi farmaci per la cura di molti tumori.

E' stata infatti individuata una sorta di centrale energetica da cui possono partire segnali alterati che indirizzano, per errore, verso lo sviluppo di un caotico traffico e da qui a vari tipi di alterazioni e malattie metaboliche che possono favorire l'insorgenza di tumori come il melanoma e il cancro del seno triplo negativo. L'importanza della ricerca pone sotto la lente la possibilità di istruire un corpo di vigili (nuovi farmaci) capaci di rimettere ordine nell'equilibrio alterato. La scoperta è frutto di uno studio appena pubblicato sulla prestigiosa rivista Nature e apre concretamente la strada alla messa a punto di nuovi farmaci per la cura di molti tumori.

Lo studio è frutto di un'importante collaborazione internazionale con i gruppi di James Hurley dell'Università della California e di Lukas Huber dell'Università di Innsbruck e segna una tappa fondamentale verso l'individuazione di farmaci in grado di agire riparando processi bilogici alterati. Lo studio è stato finanziato da Telethon che dall'Airc e della Regione Campania.

I ricercatori del Tigem cercheranno terapie mirate, tali da ristabilire l'equilibrio metabolico compromesso in alcune condizioni patologiche che fanno da apripista allo sviluppo di neoplasie, come già dimostrato nei modelli animali.

Ospedali & territorio

Neoplasie, i controlli prescrivibili direttamente dall'oncologo

NAPOLI - A partire dal 2 gennaio scorso per i malati di tumore, i controlli saranno prescrivibili direttamente dall'oncologo, ed eseguibili anche in ospedale, senza più la necessità di rivolgersi al medico di famiglia. E saranno gli stessi specialisti ospedalieri a prenotare la prestazione al Cup. Un'altra buona notizia per i malati oncologici è che la Regione Campania ha disposto l'azzeramento dei tetti di spesa. Fine moduloIl provvedimento inserito nell'ultima finanziaria restituisce dignità e speranza ai malati di cancro che non riuscivano più a sostenere i costi elevatissimi degli esami di controllo e quelli diagnostici, per non parlare degli screening». Snelliti anche procedure e passaggi burocratici per accedere alle visite. Una svolta che favorirà anche la presa in carico dei malati di cancro da parte dei Gom (Gruppi oncologici multidisciplinari) dei nosocomi. Tra gli altri benefici contenuti nella disposizione, il varo dei pacchetti ambulatoriali di prestazioni connesse e i cosiddetti "Pacc", percorsi ambulatoriali complessi e coordinati, che faranno in modo che le cure oncologiche basate su infusione di farmaci e chemioterapici non siano più erogate mediante day-hospital ma a casa del malato con appuntamento domiciliari o in regime ambulatoriale, attraverso il day-service.

I Pacc permetteranno anche di includere in un unico pacchetto, somministrazione del farmaco (rimborsato), visita specialistica, esami e successivi controlli, in modo che nessuno sia più costretto a barcamenarsi tra le lungaggini della burocrazia monitorando tempistiche e tetti di spesa che prima risultavano superati già il 10 del mese. Col nuovo sistema, invece, tutte le attività di supporto infermieristico, monitoraggio clinico, le consulenze, la prescrizione dei farmaci integratori, saranno compresi nel day service.

Ceinge Napoli, nuove terapie per bambini con Sma

NAPOLI - Dai laboratori del Ceinge di **Napoli** nuove prospettive terapeutiche per i bambini affetti da Sma. Esiste una correlazione tra i livelli di neuro infiammazione e severità dell'Atrofia Muscolare Spinale: lo ha scoperto un gruppo di ricercatori napoletani studiando il liquido cerebrospinale dei bambini affetti dalla forma più grave della SMA, secondo i quali associare l'utilizzo di agenti antinfiammatori mirati alla terapia farmacologica con Nusinersen, potrebbe migliorare i benefici clinici del trattamento.Si tratta dei risultati ottenuti nel laboratorio di Neuroscienze traslazionali del CEINGE-Biotecnologie avanzate Franco Salvatore, in collaborazione con la Columbia University di New York e le Università campane Luigi Vanvitelli e Federico II, insieme agli Ospedali pediatrici Bambino Gesù di Roma e Giannina Gaslini di Genova.

Caserta, infopoint per i malati di sclerosi multipla

CASERTA - Per migliorare l'accoglienza e l'assistenza **ai malati di sclerosi multipla,** l'Azienda Ospedaliera **«Sant'Anna e San Sebastiano»** di Caserta ha aperto un info point dell'AISM, l'Associazione Italiana Sclerosi Multipla, che sarà attivo ogni giovedì (9:30-13:00) nella sede dell'Unità operativa complessa di Neurologia.

L'info point nasce allo scopo di supportare e orientare i pazienti affetti da sclerosi multipla e i loro familiari per facilitarli, in sinergica collaborazione con gli operatori ospedalieri, nella fruizione dei servizi. Al tempo stesso, intende favorire l'accesso diretto degli interessati alle informazioni AISM sulla sclerosi multipla e le patologie correlate, sui problemi collegati, sulle risorse di cui il territorio dispone per i malati e le loro famiglie.

Il direttore di Neurologia, Stefania Miniello, spiega che «in provincia di Caserta i malati di sclerosi multipla sono, secondo una stima, più di 2000. I farmaci permettono di rallentare la progressione della disabilità e ridurre la frequenza di ricadute, ma il nostro obiettivo è di migliorare la qualità di vita dei pazienti. In questa direzione viaggia l'attivazione dell'info point e il progetto dell'Unità operativa di Neurologia di realizzare un percorso terapeutico che privilegia l'approccio multidisciplinare e punta, di conseguenza, a coinvolgere le altre Unità operative dell'Azienda ospedaliera di Caserta nell'assistenza alle persone affette da questa patologia».

Moscati, pediatria e cardiochirurgia al top negli standard di sicurezza

AVELLINO - L'Ospedale **Moscati** di Avellino ha alti standard di sicurezza, nell'assistenza e nelle procedure. La struttura ha ottenuto, prima in Italia, il riconoscimento del livello 3 di conformità ai requisiti definiti nel "Modello italiano per la gestione del rischio in sanità MIGeRiS™", elaborato da Luiss Business School. E hanno raggiunto il livello massimo la Pediatria e la Cardiochirurgia. Attestati che si traducono in un ospedale non solo più sicuro, ma anche con alti standard qualitativi in termini di assistenza e di procedure.

«La nostra azienda - spiega il manager **Renato Pizzuti** - , attraverso l'adesione al modello italiano MIGeRiS™, ha sviluppato un sistema di gestione del rischio clinico basato sull'identificazione, sulla valutazione e sul trattamento dei rischi, sia attuali che potenziali, con lo scopo primario di garantire maggiore sicurezza ai pazienti e, allo stesso tempo, di migliorare la qualità dell'assistenza e di abbattere i costi attraverso la riduzione degli eventi avversi prevenibili. Un grande lavoro dietro le quinte di adeguamento a importanti indicatori di riferimento». Per ottenere le certificazioni, è stato necessario conformare il sistema a un insieme di specifiche organizzative, strutturali e gestionali. Il modello, infatti, si articola in quattro livelli, con un approfondimento crescente e incrementale, in quanto ciascun livello superiore comprende, oltre ai propri requisiti, anche tutti quelli dei livelli precedenti.

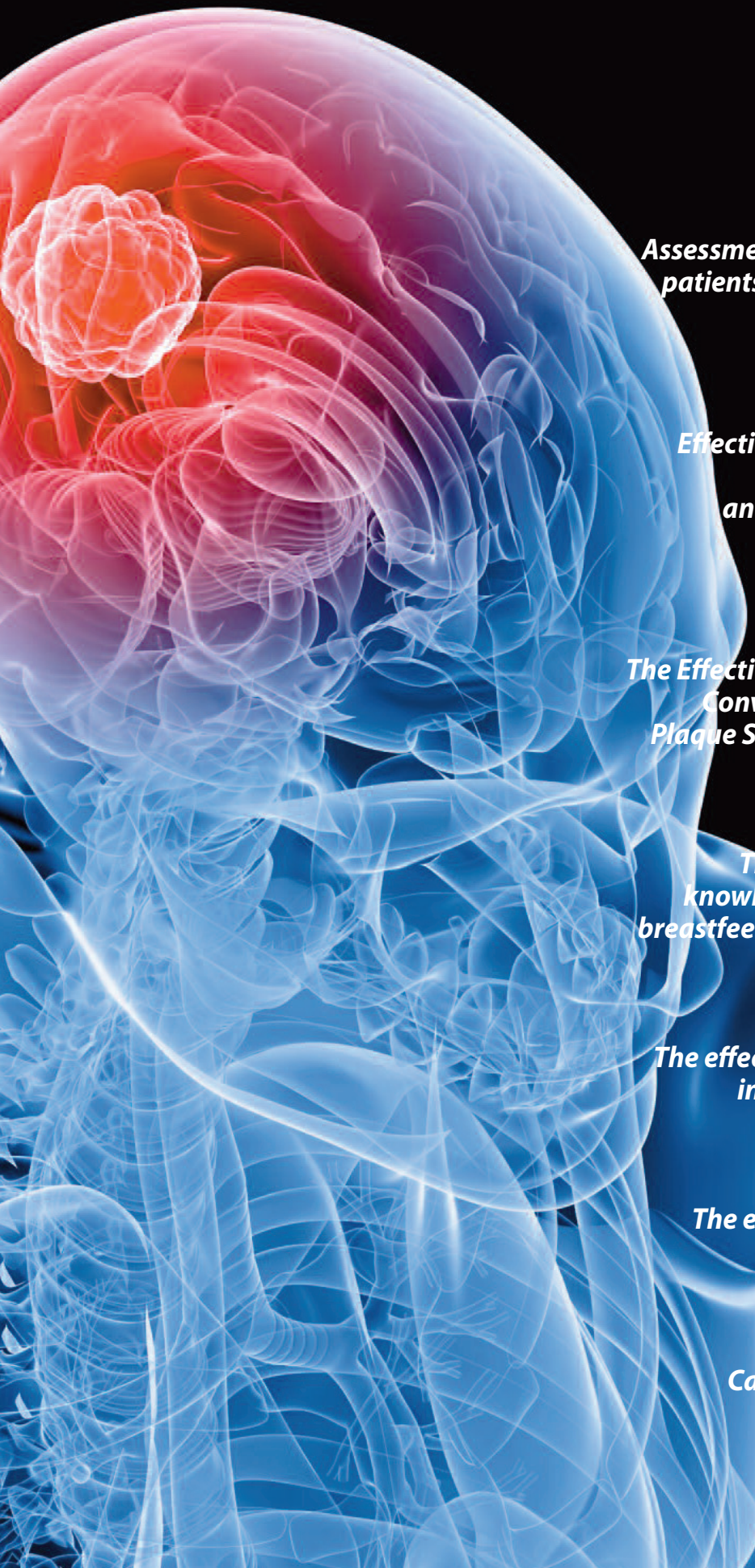
Ospedali & territorio

Pineta Grande Hospital, inaugurato il nuovo complesso

CASERTA - La nuova struttura della famiglia del medico Vincenzo Schiavone prevede il passaggio da 194 posti letto per degenza a 274; il personale da 600 passerà a 900 dipendenti. La struttura, con un investimento per la maggior parte privato di 80 milioni di euro, incrementa di molto l'offerta di salute e assistenza sanitaria sul territorio. A seguito dell'ampliamento le sale operatorie diventano 20. Il nuovo corpo 1 ospita ostetricia, ginecologia e il punto nascita, il primo in provincia di Caserta. "Ho apprezzato – ha spiegato il ministro della Salute Orazio Schillaci, collegato da remoto – gli alti ed elevati livelli assistenziali e credo che questo ampliamento porterà un ulteriore miglioramento dell'offerta per tutti quanti i cittadini e spero di avere in futuro la possibilità di venire nuovamente nel vostro ospedale. Credo che questo sia un esempio della sanità che va offerta ai cittadini". "È un investimento importante fatto da un imprenditore privato della sanità, il dottore Schiavone. È una realtà di eccellenza per le professionalità che ha raccolto, per le tecnologie che sono presenti in questa struttura e anche perché è un ospedale pienamente integrato nel sistema sanitario regionale perché è a servizio di tutta l'area nord di Pozzuoli dove non abbiamo strutture pubbliche. Accoglie 50mila pazienti l'anno al pronto soccorso e ha un'organizzazione straordinaria. È un esempio di eccellenza nel campo della sanità che può competere tranquillamente con altre realtà del nord, San Raffaele e Humanitas di Milano. C'è da essere orgogliosi e da utilizzare fino in fondo queste tecnologie e queste professionalità per avere un servizio di elevata qualità". Lo ha detto il presidente della Regione Campania, Vincenzo De Luca, a margine dell'inaugurazione della prima parte dell'ampliamento del Pineta Grande Hospital di Castel Volturno (Caserta).

Policlinico Federico II eccellenza per cancro ovaio

Un nuovo riconoscimento per l'impegno dell'Azienda Ospedaliera Universitaria Federico II di Napoli in favore delle donne. La Fondazione Onda, Osservatorio nazionale sulla salute della donna e di genere, ha infatti certificato i percorsi di alta specializzazione e multidisciplinarietà attivati per la presa in carico nel campo dell'oncologia ginecologica a supporto delle donne con tumore all'ovaio o all'endometrio. Il tutto nel segno di un'assistenza umana e personalizzata. La consegna del riconoscimento nella "Sala Zuccari" presso il Senato della Repubblica."Un riconoscimento importante - commenta il direttore generale Giuseppe Longo - perché riflette l'impegno e la precisa volontà di tutti i nostri professionisti di dare risposta, in modo concreto, alle necessità specifiche delle donne colpite da questi tumori. Neoplasie che hanno un impatto estremamente traumatico ed incidono pesantemente sulla qualità di vita delle donne che ne vengono colpite". E il riconoscimento della Fondazione Onda pone proprio l'accento sulla realizzazione di una completa presa in carico delle pazienti da parte dei professionisti e della struttura sanitaria.La mappatura dei "Percorsi di Oncologia ginecologica a misura di donna", promosso da Onda, ha inteso, infatti, identificare gli ospedali del network Bollini Rosa che valorizzano anche gli aspetti legati alla personalizzazione ed umanizzazione dell'assistenza attraverso l'offerta di servizi che considerano i bisogni e le aspettative delle donne con tumore all'ovaio e all'endometrio.



NSC Nursing

Supplemento di ricerca infermieristica

Assessment of quality of life for hypertensive patients: Integrative review for Potential of Novel Assessment Tools of quality of life

Effectiveness of e-book application model uterine atony management guide and pocketbook in improving midwife knowledge and skills in basic care: pre-post study

The Effectiveness of Electric Toothbrushes and Conventional Toothbrushes in Reducing Plaque Scores on School-Aged Children with Mental Impairment: Pilot Study

The effect of virtual education on the knowledge of postpartum mothers about breastfeeding during the covid-19 pandemic: quasi-experimental design

The effect of parental holding on pain levels infant during measles immunization: quasi-experimental study

The effectiveness of audio hypnotherapy in reducing postpartum depression during new normal

Cardiopulmonary Resuscitation (CPR) during COVID-19 Pandemic

NSC Nursing

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Assessment of quality of life for hypertensive patients: Integrative review for Potential of Novel Assessment Tools of quality of life

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Review article

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ABSTRACT

Background & Aim: The body of literature on QoL has steadily grown over recent years, spurred by the promotion of research and the cross-cultural adaptation and validation of assessment instruments in different languages. However, limited information exists on the most commonly used instruments against the backdrop of current demographic and epidemiological trends. The aim this study to evaluate QoL assessment instruments used in hypertensive patients.

Methods & Materials: This review was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. Databases used including Sciencedirect, Cochrane library, Pubmed, Proquest, and the Wiley Online Library, utilizing keywords that are tailored to the Mesh Terms. Systolic Blood Pressure (SBP) value at least 140 mmHg and/or Diastolic Blood Pressure (DBP) value at least 90 mmHg, or the patient had a history of hypertension and was administered with antihypertensive drugs, English version, observational studies that presented Health-Related Quality of Life (HRQoL) scores in hypertensive individuals using varied assessment tools (WHOQoL BREF, SF-36, MINICHAL, etc) where these tools assess the situation of the patient's quality of life based on the domain of life (physiological, psychological, social interaction, etc.) in the form of numbers, and published between January 2000 to December 2021 were inclusion criteria of the study. Relevant studies were read critically, analyzed, and described in detail. Survey data were processed in the form of comparative tables.

Results: A total of 2,287,348 references were found through databases, and for the final screening, twenty-two articles were finally designated as articles to be reviewed. The SF-36 (SF-8, SF-12), WHOQoL BREF, MINICHAL, and PECVEC are assessment tools used in the studies included in this review. The SF-36 was the most widely used tool in the studies included in this review. One of the critical domains to assess is spiritual, where none of the studies included this domain.

Conclusion: The SF-36 is the most frequently used assessment tool. However, this form is a general form that is not explicitly intended to assess the quality of life in hypertension only. The

spiritual domain is one of the important items that need to be included in the QoL assessment tool.

Keyword: *Quality of life, assessment tool, hypertension*

INTRODUCTION

Hypertension is one of the most common chronic diseases that threaten the health of human beings. Poor adherence to treatment and low control rate of hypertension are the risk factors for coronary heart disease, stroke, and renal insufficiency, causing a great disease burden worldwide [1–3]. For a long time, the evaluation for the health condition of hypertension patients is usually based on the control of patients' blood pressure (BP) or the degree of damage to the target organ [4–6]. As the medical model has changed from the biological medical model to the biological–psychosocial medical model, it is difficult to comprehensively and accurately assess chronic diseases (such as hypertension) in terms of incidence, death rate, cure rate, and life expectancy. Thus, the health-related quality of life (HRQoL) has gradually arisen with great attention in the world [7–9].

Quality of Life (QoL) is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment[10]. Health related QoL (HRQoL) is emerging as an important outcome in hypertension and can be adversely affected by hypertension itself and side-effects of antihypertensive drugs. However reports of HRQoL among hypertensive individuals have been conflicting, with some studies finding worse HRQoL among hypertensive compared to the general population, while Moum T et al reported no impact of hypertension on HRQoL in some / all domains. There is a paucity of studies reporting QoL in Indian hypertensive patients [8,11,12]. Assessing QoL is of essence, as this concept serves as an indicator in clinical trials for specific diseases, assesses the physical and psychosocial impact that the disorders may have on affected individuals, allowing a better knowledge about the patient and their adaptation to their unhealthy condition. Roca-Cusachs et al reported that hypertensive patients had a significant reduction in QoL compared to normotensive patient [13,14].

Scales measuring HRQoL of hypertensive patients include EuroQOL five-dimension questionnaire, WHO QoL-100 (the well-being questionnaire), SF-36 (the Medical Outcomes 36 Item Short-form

Health Survey), and so on. SF-36 is the most widely used scale for assessing HRQoL, which has high reliability. In addition, SF-12, the shorter form of SF-36, is an effective alternative to the SF-36 in hypertension. Although many articles showed a significantly lower HRQoL of hypertension patients, some still present no difference in many domains [7,15,16].

Another quality of life assessment form that is starting to be widely used is MINICHAL. MINICHAL, an assessment tool focusing on people with hypertension, was formed in 2002 by a group from Spain [13], and it was shown to be effective in the measurement of HRQoL of elderly people with hypertension linked to the supplementary health sector and evidenced a lower impairment in HRQoL among the elderly practicing physical activity [17].

The body of literature on QoL has steadily grown over recent years, spurred by the promotion of research and the cross-cultural adaptation and validation of assessment instruments in different languages. However, limited information exists on the most commonly used instruments against the backdrop of current demographic and epidemiological trends. In light of the above, the aim of this study was to evaluate QoL assessment instruments used in hypertensive patients.

METHODS

Review Protocol

This integrative review was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement [18]. The current study tries to evaluate QoL assessment instruments used in hypertensive patients from articles that have been published in the period January 2000 to December 2021.

Searching strategy

Relevant articles were searched and collected using Sciencedirect, Cochrane library, Pubmed, Proquest, and the Wiley Online Library, with a publication time between 2000 and 2021. The search

keywords were adjusted according to the Mesh terms for health research. The keywords used vary, depending on the search engine used. In general, the keywords focus on Quality of life OR HRQoL AND Hypertension AND Measurement AND Assessment tool OR WHOQoL OR SF-36 OR MINICHAL. Summary of keywords used in each databases are reported in table 1.

Databases	Keywords
Sciencedirect	- Quality of life OR HRQoL AND Hypertension AND Measurement AND Assessment tool OR WHOQoL OR SF-36 OR MINICHAL
Cochrane library	- Quality of life OR HRQoL AND Hypertension OR Hypertensive AND Measurement AND Assessment tool OR WHOQoL OR SF-36 OR MINICHAL
Pubmed	- Quality of life OR HRQoL AND Hypertension OR high blood pressure AND Measurement AND Assessment tool OR WHOQoL OR SF-36 OR MINICHAL
Proquest	- Quality of life OR HRQoL AND Hypertension AND Measurement AND Assessment tool OR WHOQoL OR SF-36 OR MINICHAL
the Wiley Online Library	- Quality of Life AND Hypertension AND Measurement AND Assessment tool OR WHOQoL OR SF-36 OR MINICHAL

Table 1. *Search string in databases*

Study eligibility

Inclusion criteria: Hypertension is defined as Systolic Blood Pressure value at least 140 mmHg and/or Diastolic Blood Pressure value at least 90 mmHg, or the patient had a history of hypertension and was administered with antihypertensive drugs. Language was restricted to English. All observational studies that presented Health Related Quality of Life (HRQoL) scores in hypertensive individuals using varied assessment tools (WHOQoL BREF, SF-36, MINICHAL, etc) where these tools assess the situation of the patient's quality of life based on the domain of life (physiological, psychological, social interaction, etc.) in the form of numbers, published between January 2000 to December 2021. In addition, we manually searched the cited reference of

potentially eligible articles and published reviews.

Studies were excluded if they were carried out in special groups (armies, a pasturing area, etc.) and cannot represent the general population; they compared HRQoL of individuals randomized to different antihypertensive agents or placebo or other interventions.

Study selection and data analyses

After a further authentication of the articles, cross sectional, and case-control study design were chosen for final analysis. Relevant studies were read critically, analyzed, and described in detail. The methodological quality of studies was evaluated using National Institute of Health (NIH) for observational cohort and cross sectional studies. The checklist has 14 questions including Q1: Was the research question or objective in this paper clearly stated?; Q2: Was the study population clearly specified and defined?; Q3: Was the participation rate of eligible persons at least 50%?; Q4: Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?; Q5: Was a sample size justification, power description, or variance and effect estimates provided?; Q6: For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?; Q7: Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?; Q8: For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome?; Q9: Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?; Q10: Was the exposure(s) assessed more than once over time?; Q11: Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?; Q12: Were the outcome assessors blinded to the exposure status of participants?; Q13: Was loss to follow-up after baseline 20% or less?; Q14: Were key potential confounding variables

measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)? relating to the research question, selection of study subjects, statistical analysis and measurement and selection of timeframe between exposure and outcome to see an effect. The quality grading of studies was done as Good (G) if the overall rating was at least 70%, Fair (F) if rating was at least 50% and poor (P) if the rating was less than 50% . The table assists in identifying the key characteristics of each study included in this review, with quality of life in patients with hypertension theme.

Studies	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Saleem, et al. 2012, Pakistan [19]	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y
Qian et al., 2009, China [20]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Mollaoğlu et al., 2015, Turkey [21]	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y
Katsi et al., 2017, Greece [22]	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y
Saboya et al., 2010, Brazil [23]	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y
Mi et al., 2015, China [24]	Y	Y	Y	NR	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Zygmuntowicz et al., 2012, Poland [25]	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y
Silva et al., 2020, Brazil [26]	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y
Oza et al., 2014, India [27]	Y	Y	Y	NR	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Liang et al., 2019, China [28]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Korhonen et al., 2011, Finland [29]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Zheng et al., 2021, China [7]	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y

Wong et al., 2020, China [30]	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y
Trevisol et al., 2012, Brazil [31]	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y
Chen et al., 2021, China [32]	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y
Mena-Martin et al., 2003, Spain [33]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Bardage & Isacson, 2001, Sweden [34]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
Khalifeh et al., 2015, Lebanon [35]	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y
Qin et al., 2018, China [36]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Fernandez et al., 2007, Spain [37]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
Borges et al., 2017, Brazil [38]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
Cortes et al., 2016, Brazil [39]	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y

N= No; Y= Yes; NR= Not Reported

Table 2. *Summary of quality assessment*

RESULTS

Search Results

Combining the output of the searches in the various databases, a total of 2,287,348 references were found. After duplicates were removed, 1,918,891 potentially relevant references remained from the database searches. 1,918,854 articles removed by reasons of irrelevant, review/report, not full text, book chapter. 22 articles were finally designated as articles to be reviewed. The main focus of this integrative review is the evaluation of quality of life assessment tools used in hypertensive patients. The authors developed tables for data analysis with the study design, participants characteristics

including the number, assessment tools used, domain of measurements, measurement method, and the main results of Quality of Life assessment tools. PRISMA flow chart for study selection, can be seen in figure 1.

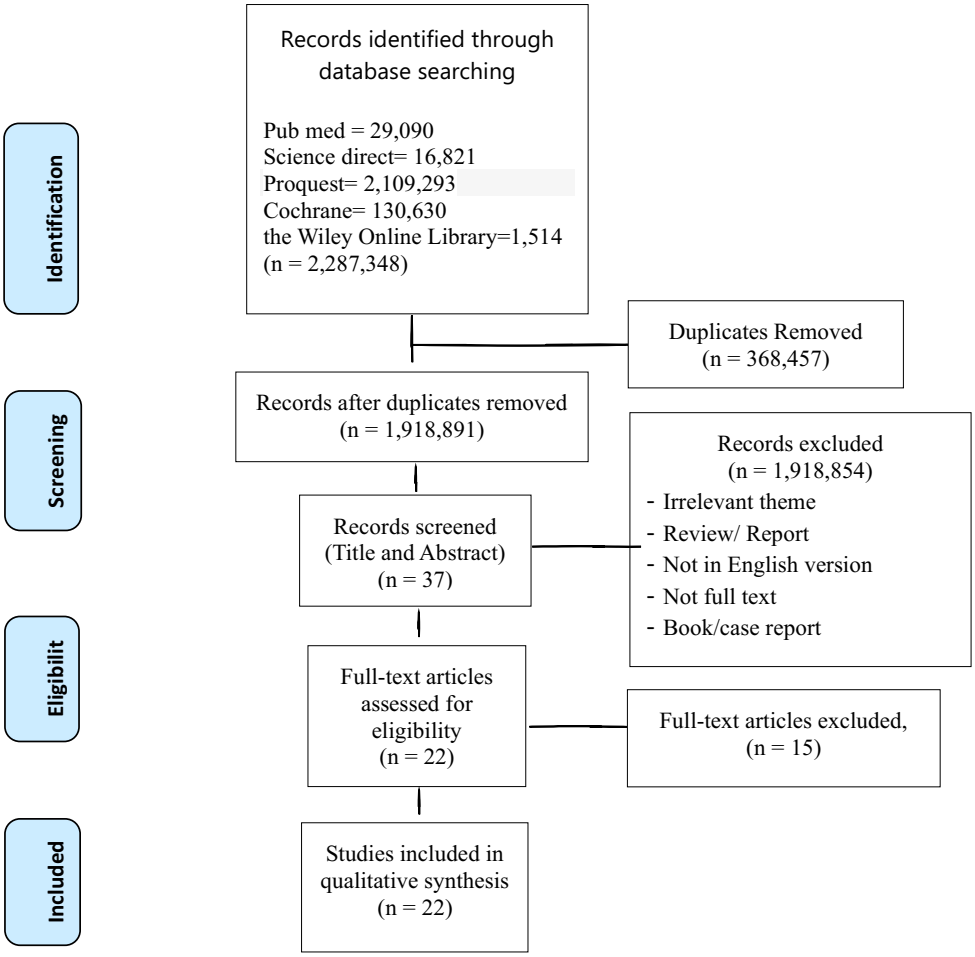

Figure 1. *PRISMA flowchart for Study selection*

Characteristics of the studies

The studies included in this review are from several countries globally, including China (n=7), Brazil (n=5), and one study each in Pakitan, Turkey, Greece, Lebanon, Sweden, Spain, Finland, and India. The study design used mainly was cross-sectional, which focused on the relationship between hypertension and the quality of life. The assessment tools used vary, including WHOQoL-BREF,

SF-36, SF-12, SF-8, MINICHAL, and PECVEC. Several studies used a control group to compare the quality of life of people with hypertension with people who did not suffer from hypertension. Self-reported and face-to-face interviews measure the quality of life through a questionnaire format. Several studies included in this review also did not determine the degree of hypertension which was the inclusion criteria in the study conducted. Overall, 140 mmHg for systolic blood pressure is the standard for patients with hypertension.

Author, year, Country	Aim	Study design	Participants	Assessment tools	Quality of life domain	Measurement method	Results of QoL measurement
Saleem, et al. 2012, Pakistan [19]	To describe the health-related quality of life (HRQoL) profile of hypertensive population in Pakistan.	Cross-sectional	385 primary hypertension patients	EuroQoL EQ-5D	Mobility, self-care, usual activities, pain /discomfort and anxiety / depression	Self-administered, questionnaire	No problems in the "self care" and "usual activities" domain, while moderate problems in "mobility", "pain" and "anxiety" domain.
Qian et al., 2009, China [20]	To evaluate the effect of target intervention on HRQoL in hypertensive patients.	Cross-sectional	644 hypertensive patients	SF-36	Physical functioning (PF), role-physical (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role-emotional (RE), and mental health (MH)	Face-to-face interviews	Duration of the hypertension affect GH and VT domain. The number taking anti-hypertension medicine was associated with RE domain. Grade-based management of community physicians had a significant correlation with the domains of RP, GH, and SF domain. Controlled BP significantly higher HRQoL especially in domains of

							RP, SF, and RE.
Mollaoğlu et al., 2015, Turkey [21]	To evaluate the association between medication adherence and Health-Related Quality of Life (HRQoL)	Cross-sectional	120 hypertensive patients	Turkish version of SF-36	Physical functioning, social functioning, physical role limitation, emotional role limitation, bodily pain, mental health, vitality, and general health.	Interview	Physical health and mental health strongly positive correlation with complains to therapy of hypertension
Katsi et al., 2017, Greece [22]	To investigate the effect of awareness of arterial hypertension on quality of life in hypertensive patients in Greece	prospective observational study	189 hypertensive patients	SF-36 (Greek standard version 1.0)	Physical functioning (PF), role physical (RP), bodily pain (BP), general health perception (GH), vitality (VT), social functioning (SF), role emotional (RE), and mental health (MH).	Self-administrated	Women had lower scores on BP, SF, RE, and VT. Increased age was independently associated with lower scores on PF and RE. The presence of COPD was associated with lower scores on PF, RP. Diabetes was associated with lower scores on MH. Also, dippers had not different levels of HRQoL as compared with non-dippers. LV hypertrophy was associated with lower scores on BP, and kidney failure was associated with lower scores on GH, RE, MH, VT. Greater depression levels are associated

							with lower levels of HRQoL.
Saboya et al., 2010, Brazil [23]	To draw attention to the effects of depression and anxiety in the worsening of hypertensives' quality of life.	Case-control	302 patients	SF-36	Physical functioning, limitations due to physical problem, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems, and mental health.	Self administered questionnaire	Depressive index affect the quality of life results
Mi et al., 2015, China [24]	Propose the use of quintile regression to explore more detailed relationships between awareness of hypertension and health-related quality of life	Cross-sectional	2737 Hypertensive patients	The mandarin version of SF-36	Physical function (PF), role limitations due to physical health condition (RP), bodily pain (BP), general health condition (GH), vitality (VT), social function status (SF), role limitations due to emotional health condition (RE), and mental health (MH).	Self-administered	Patients who were aware of hypertension had lower scores (Poor QoL) than patients who were unaware of hypertension and normotensive.
Zygmuntowicz et al., 2012, Poland [25]	To determine the association between comorbidities and the HRQoL	Cross-sectional	≥140/90 mmHg	SF-12	Physical functioning, role physical, bodily pain, vitality, social functioning,	Self-administered	- Women reported lower HRQoL in all dimensions. - HRQoL decreased with age.

					role emotional, mental health, and general health.		- Both men and women reported that general health deteriorated, while only women reported a decline in physical health. - From the sixth decade of life, both men and women reported lower HRQoL in all dimensions except vitality - Patients taking more medications reported lower values in all HRQoL dimensions.
Silva et al., 2020, Brazil [26]	To analyze the factors associated with quality of life in hypertensive patients.	Cross sectional	80 hypertensive patients	SF-36	functional capacity, physical aspects, pain, general health, vitality, social aspects, emotional aspects and mental health	Interview	- Lower educational level, higher body mass index and lower muscle strength showed the worse quality of life in the functional capacity domain - Higher systolic blood pressure was related to higher values in the physical aspects domain - Women presented worse quality of life in the pain domain compared to men and

							educational level was directly related to social aspects
Oza et al., 2014, India [27]	To determine QoL in patients suffering from hypertension using MINICHAL and WHOQoL-BREF tools.	Cross-sectional	Stage 1 and 2 of hypertension	MINICHAL and WHOQoL-BREF	MINICHAL : consists of two domains – mental (nine items) and somatic (seven items) WHOQoL-BREF: classified into five domains: overall general health - global (two items), physical (seven items), psychological (six items), social relationships (three items) and environment (eight items).	Interview, and self administration	- WHOQoL-BREF : For overall and general health patients responded as average to good. As far as physical, psychological, social and environmental domains were concerned, majority of the patients responded as poor to good except a few responding as "very good" for physical domain. - MINICHAL : Regarding mental domain related questions majority of the participants responded as "yes, somewhat" and "yes, a lot". Somatic domain related responses by majority of the patients lay between "Not, at all" and "Yes, a

							lot". 67% patients responded that QoL is affected a lot by hypertension and its treatment. Mental domain was affected more compared to somatic.
Liang et al., 2019, China [28]	To use the EQ-5D-5L and its recently developed Chinese value set to analyze HRQoL and its inluencing factors among hypertensive population in rural China.	Cross-sectional	16,596 participants, 65 years of age	Chinese value set for the EQ-5D-5L	Mobility (MO), self-care (SC), usual activities (UA), pain/discomfort (PD) and anxiety/depression (AD).	Self-reported questionnaire	- The EQ-5D utility scores of females were lower than those of males and decreased with age - Compared with urban areas, rural hypertensive patients had significantly lower utility scores both in EQ-5D and in all five dimensions
Korhonen et al., 2011, Finland [29]	To identify persons at risk for cardiovascular diseases in general population.	Cross-sectional	901 patients	SF-36	Bodily pain; general health; mental health; physical functioning; role emotional; role physical; social functioning; vitality.	Self-administered questionnaire	HRQoL concerning physical functioning and general health is reduced in hypertensive patients who are aware of their condition, but not in patients who are unaware of their hypertension status
Zheng et	To assess	Cross-	705	The EQ-5D-	Mobility,	Not reported	Significantly

al., 2021, China [7]	the HRQoL of elderly patients with hypertension and its influencing factors using EuroQol five-dimensional-three-level (EQ-5D-3L) in China.	sectional	hypertensive patients, 60 years old and above	3L	self-care, usual activities, pain /discomfort and anxiety/ depression		more problems in each of the EQ-5D domains and have a lower health utility index than the local general population
Wong et al., 2020, China [30]	To examine health-related quality of life (HRQoL) in elderly patients with hypertension in Hong Kong	Cross-sectional	3,351 hypertension patients, mean age was 72.74 years	The EQ-5D-5L HK version	Mobility, self-care, usual activities, pain /discomfort and anxiety/ depression	Self-reported by phone	The effects of age, educational level, working and living status and multimorbidity status on HRQoL were statistically significant among elderly patients with hypertension
Trevisol et al., 2012, Brazil [31]	The association between hypertension and quality of life, with particular attention to these aspects, was investigated in this population-based study.	Cross-sectional	1858 adult , 18–90 years	SF-12	The physical component (PCS; physical component summary) includes physical functioning, physical role limitations, bodily pain and general health; the mental component (MCS; mental component summary) refers to mental health, emotional role limitations, social	Interview using structured questionnaire	Individuals with hypertension have lower quality of life than normotensive participants in all domains, particularly when BP is controlled by drug treatment.

					functioning and vitality.		
Chen et al., 2021, China [32]	To evaluate health-related quality of life (HRQoL) of middle-aged and elderly people with hypertension in Enshi, China, and to explore the important correlates defining HRQoL.	Cross-sectional	500 participants	The Chinese version of SF-12	PCS includes general health, physical functioning, role-physical, and bodily pain, MCS comprises vitality, social functioning, role-emotional, and mental health.	Self-monitoring	Scores for physical functioning, role-physical, bodily pain, and general health were 36.74±12.60, 23.00±4.14, 32.50±12.26, and 32.74±12.70, while vitality, role-emotional, social functioning, and mental health scores were 45.29±13.81, 47.62±12.28, 17.55±5.44, and 47.66±13.89, means poor quality of HRQoL
Mena-Martin et al., 2003, Spain [33]	To analyze the impact of known and unknown hypertension on health-related quality of life (HRQoL)	Cross-sectional	466 hypertensive patients	SF-36	Bodily pain; general health; mental health; physical functioning; role emotional; role physical; social functioning; vitality.	Interview	lower scores on four SF-36 scales: physical function, general health, vitality and mental health. The group of subjects with hypertension, whether diagnosed or not, displayed a poorer HRQoL with respect to the non-hypertensive patients, solely in physical functioning and general health.
Bardage & Isacson, 2001, Sweden [34]	To describe the relationship between hypertension and health-related	Cross-sectional	5404 hypertensive patients, Aged 20–84 years	the Swedish version of the SF-36	Bodily pain; general health; mental health; physical functioning;	Questionnaire	- Hypertensives rated significantly lower scores in all eight scales of the SF-36 when

	quality of life (HRQoL) in a Swedish general population				role emotional; role physical; social functioning; vitality.		controlling for age and sex - Physical functioning, role physical, bodily pain, and general health were significantly lower for those in older ages - Men showed significantly higher scores in vitality and bodily pain domains than did women.
Khalifeh et al., 2015, Lebanon [35]	To evaluate QoL of hypertensive patients compared with non-hypertensive subjects and to suggest possible predictors of QoL in Lebanon	Case-control	336 hypertensive patients	SF-8	Physical functioning, physical role, bodily pain, general health, vitality, social functioning, emotional role and mental health.	A structured face to face interview.	Controls had higher significant scores ($p < 0.05$) than hypertensive individuals in all domains of the QoL score. Controls showed better QoL in gen-eral health, physical functioning, role physical limitation, bodily pain, vitality, and PCS with ($p < 0.001$). They also showed better health performance in mental health related items including social functioning ($p = 0.033$), mental health ($p = 0.011$), emotional limitation role ($p < 0.001$), and MCS ($p = 0.026$)
Qin et al., 2018,	To evaluate the	Cross-sectional	20,778 non-hypertensive,	EQ- 5D-3L	Mobility, self-care,	Questionnaire	- The mean for the

China [36]	difference in HRQoL between residents with and without hypertension among different age subgroups in Shanghai		7,952 hypertensive		usual activities, pain/discomfort, and anxiety/depression.		hypertension group was also lower than the mean for the non-hypertension group (0.93 vs 0.98, $p < 0.0001$) - The biggest difference of rate of moderate and extreme between the two groups was in pain/discomfort dimension (18.42% vs 6.91%) .
Fernandez et al., 2007, Spain [37]	To evaluate the association between QoLHP and Physical exercise in an effectiveness approach	Cross-sectional	361 hypertensive patients	PECVEC Questionnaire	The physical, psychological and social dimensions	Interview and questionnaire.	- Physical exercise is associated with an improvement in all the PECVEC scales for women and in the five PECVEC scales, corresponding to the physical and psychological dimensions - Sexual activity is associated with better results in all PECVEC scales, but only for women.
Borges et al., 2017, Brazil [38]	To analyze the Mini questionário de Qualidade de Vida em Hipertensão Arterial (MINICHA	Cross-sectional	712 hypertension people	MINICHAL	Mental state, somatic manifestations	Questionnaire	The items related to the somatic state have had a good performance, as they have presented better power

	L – Mini-questionnaire of Quality of Life in Hypertension) using the Item Response Theory.						to discriminate individuals with worse quality of life. The items related to mental state have been those which contributed with less psychometric data
Cortes et al., 2016, Brazil [39]	To evaluate the quality of life of hypertensive employees of a public company.	Cross-sectional	48 hypertension people	MINICHAL	Mental state, somatic manifestations	Interview, phone call	There was no significant difference in the clinical and social variables between the genders, but women showed significantly higher mental ($p = 0.005$) and overall ($p = 0.012$) scores than men.

Table 3. *Characteristics of the studies included*

Quality of Life Domains

Based on the assessment tool used, the assessment domains for hypertension sufferers include general health, physical, psychological, social relationship, and environment (WHOQoL-BREF), mobility, self-care, usual activities, pain/discomfort, and anxiety/depression (EuroQoL EQ 5D), Physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional, and mental health (SF-36, SF-12, SF-8), mental, and somatic (MINICHAL), the physical, psychological, and social dimensions (PECVEC). Most studies conducted in non-English countries translate the assessment items into the language of each country to make it easier for participants to answer the question items in each assessment tool.

QoL measurement results

In general, the assessment results of the quality of life in patients with hypertension on all the assessment tools used show a low score, which means the quality of life is low. The results of the quality of life assessment based on each assessment tool can be described as follows:

In studies using the 5D EQ, the problems found in the quality of life domain include mobility, pain, anxiety [19], while other studies indicate a decrease in scores in all domains in the 5D EQ [7,28,30]. Meanwhile, for the study conducted by Qin et al. [36], which compared the quality of life between patients with hypertension and those without hypertension, it was found that only the pain/discomfort dimension showed a very significant difference in scores.

In the studies using SF-36, -12, and -8, it was found that the duration of suffering from hypertension affected general health and vitality dimensions. The amount of consumption of antihypertensive drugs is related to the role emotional dimension, and controlled blood pressure has a significantly better effect on the quality of life, especially in the domains of role-physical, social functioning, and role emotional [20]. One study revealed that physical health and mental health domains had a strong positive influence on adherence to hypertension therapy [21]. Studies in Greece revealed that women had lower BP, SF, RE, and VT scores. Increased age was independently associated with lower scores on PF and RE [22,25]. Saboya et al. [23] found that the depression index affects the quality of life outcomes. One study in China revealed that patients who were aware of hypertension had lower scores (Poor QoL) than patients who were unaware of hypertension and normotensive [24]. Lower educational level, higher body mass index, and lower muscle strength showed the worse quality of life in the functional capacity domain. Higher systolic blood pressure was related to higher values in the physical aspects domain. Women presented worse quality of life in the pain domain than men, and educational level was directly related to social aspects [26]. Decreases in physical functioning and general health scores occurred in hypertensive patients aware of their condition [29]. A study in Brazil found that patients with hypertension had a lower quality of life

than normotensive participants in all measurement domains [31,32,34,35]. Another study in Spain noted that people with hypertension had a low quality of life, especially in physical function, general health, vitality, and mental health.

Another measurement used MINICHAL, which consists of two domains, namely mental state and somatic manifestations. Oza et al. [27] found that the mental domain had more impact than the somatic domain. Meanwhile, in a study in Brazil, it was found that women have a better quality of life compared to men in the mental state domain.

DISCUSSION

This integrative review was carried out as our first step in conducting future projects to measure the quality of life of people with hypertension. Differences in culture, race, economic situation, geographical location, and so on in the world underlie our thinking to explore the possibility of imbalances in the assessment tool used internationally and has been tested for validity. However, some of the literature in this study has modified the item assessment tool used primarily for language. We realize that it is not enough to generalize its reliability and feasibility, especially in Indonesia and other countries in the Asian continent, which has extreme contrasts in culture with countries on the continent of Europe, America, and others.

The WHOQoL-BREF is one of the most commonly used generic Quality of Life (QoL) questionnaire which was developed simultaneously across a broad range of member countries, assuring that it could be used more multi-culturally and multi-lingually than any other existing QoL tool. It emphasises subjective response rather than objective life condition, with assessment made over the preceding two weeks [25]. WHOQoL-BREF consists of four main domains including physical health, psychological, social relationship, and environment. The aspects included in these domains include the physical health domain consisting of Activities of daily living, Dependence on medicinal substances and medical aids, Energy and fatigue, Mobility, Pain and discomfort, Sleep

and rest, and Work Capacity [40]. The psychological domain consists of Body image and appearance, Negative feelings, Positive feelings, Self-esteem, Spirituality / Religion / Personal beliefs, thinking, learning, memory, and concentration. The social relationship domain consists of Personal relationships, Social support, and Sexual activity. Domain environment consists of financial resources, Freedom, physical safety and security, health and social care: accessibility and quality, Home environment, Opportunities for acquiring new information and skills, Participation in and opportunities for recreation/leisure activities, Physical environment (pollution/noise/traffic/climate), and Transport [41,42].

The 3-level version of EQ-5D (EQ-5D-3L) was introduced in 1990 by the EuroQol Group. The EQ-5D-3L essentially consists of 2 pages: the EQ-5D descriptive system. The EQ-5D-3L descriptive system comprises the following five dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each dimension has 3 levels: no problems, some problems, and extreme problems. The patient is asked to indicate his/her health state by ticking the box next to the most appropriate statement in each of the five dimensions. This decision results into a 1-digit number that expresses the level selected for that dimension. The digits for the five dimensions can be combined into a 5-digit number that describes the patient's health state. The 5-level EQ-5D version (EQ-5D-5L) was introduced by the EuroQol Group in 2009 to improve the instrument's sensitivity and to reduce ceiling effects, as compared to the EQ-5D-3L. The EQ-5D-5L essentially consists of 2 pages: the EQ-5D descriptive system. The descriptive system comprises five dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each dimension has 5 levels: no problems, slight problems, moderate problems, severe problems and extreme problems. The patient is asked to indicate his/her health state by ticking the box next to the most appropriate statement in each of the five dimensions. This decision results in a 1-digit number that expresses the level selected for that dimension. The digits for the five dimensions can be combined into a 5-digit number that describes the patient's health state [28,43,44].

The Short Form (SF) -36, -12, -8 is a health status profile originally designed to measure health status of patients and outcomes of patients. Health status could be compared between groups of patients by type of intervention, disease, or type of health insurance. The original target population was individuals living in the community. The SF-36 is used today in outpatient settings and with community-dwelling older adults. The 36 questions on the SF-36 are meant to reflect 8 domains of health, including physical functioning, physical role, pain, general health, vitality, social function, emotional role, and mental health. The categories of physical role and emotional role reflect performance at the activity and participation levels [45,46].

MINICHAL consists of the short version of *Calidad de Vida em la Hipertensión Arterial* (CHAL), developed and validated in Spain. This is a self-administered instrument comprised of 16 items divided into the Mental Status (1 to 10) and Somatic Manifestations (11 to 16) dimensions. The mental domain includes questions one to nine and score ranges from 0 to 27 points. The somatic domain includes questions 10 to 16 and score ranges from 0 to 21 points. Last question is related to the overall impact of hypertension on the QoL. The score scale is Likert scale with four possible answers (0 = No, not at all; 1 = yes, somewhat; 2 = yes, a lot; 3 = yes, very much). Total points range from 0 (best level of health) to 51 (worst level of health) [47,48].

PECVEC considers the physical, psychological and social dimensions of QoL. Patients performance and well-being are assessed in each dimension. The physical dimension is measured according to two scales: lists of symptoms (17 items) and physical functions (eight items). The psychological dimension is measured according to three scales: psychological function (eight items), positive state of mind (five items) and negative state of mind (eight items). The social dimension is measured according to two scales: social function (six items) and social well-being (five items). The items are Likert-scaled from 0 (worst) to 4 (best) [37,49].

Quality of life is a reflection of holistic aspects of human well-being. Holistic health care includes biological, psychological, sociological, and spiritual aspects, so to assess the quality of life of a

person with hypertension, it is obligatory to fully represent the items from the holistic aspect of the assessment. Differences in culture, economic status, race, geographical situation make it difficult to generalize an assessment tool.

In the results of the QoL measurement, there are several differences in the problems that most bother hypertensive patients. Studies that measured QoL using the 5DEQ showed that the most disturbing domains were mobility, pain, and anxiety. However, in another study, the pain was the main difference between hypertensive and non-hypertensive patients. There are possible factors that play a role in influencing the 5DEQ score in patients with hypertension, as shown in a study in China in the community during the COVID 19 pandemic, where the most frequently reported problems were pain/discomfort, followed by anxiety/depression, and self-care were the least frequently reported problem. The study also revealed that Men were more likely to report problems in mobility than women. Meanwhile, the above 60 years group reported the most problems in mobility, usual activities, pain/discomfort, and anxiety/depression [50].

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CONCLUSION

Overall, the existing assessment tools have been recognized for their validity and reliability. The SF-36 is the most frequently used assessment tool, because it is considered the easiest to use and in accordance with conditions in several regions of the world. However, this form is a general form that is not explicitly intended to assess the quality of life in hypertension only. Holistically, the existing assessment tools have not touched the spiritual domain, where this domain in some countries is an essential factor in daily life.

Limitations

Our main limitation is access to reputable databases, as this is our main barrier in all articles assessing hypertensive patients' quality of life using various tools. The results of this review is probably suitable only in Indonesia and some Asian countries which have similar cultural issue.

Acknowledgement

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Conflict of interest

There is no conflict of interest.

Authors' contribution

All authors equally contributed to preparing this article.

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EFFECTIVENESS OF E-BOOK APPLICATION MODEL UTERINE ATONY MANAGEMENT GUIDE AND POCKETBOOK IN IMPROVING MIDWIFE KNOWLEDGE AND SKILLS IN BASIC CARE: PRE-POST STUDY

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Abstract

Background: Midwives are one of the main health workers at the frontline of health development to accelerate the decline in Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). Therefore, competent and skilled midwives are needed in carrying out clinical procedures, especially in handling emergency cases of postpartum hemorrhage, with critical analysis skills. This study aims to determine the effectiveness of e-book application model uterine hypotonia management guide and pocket book in improving midwife knowledge and skills in basic care.

Method: The research design used was pre-post study, which was carried out in February-April 2021. The population and sample in this study were all midwives who provided delivery assistance at the Jambi City Health Center, totaling 64 respondents. Data analysis used the Wilcoxon and Mann-Whitney tests.

Results: In each intervention group, all variables, including knowledge and skills, are increased in both groups defined. The results showed that the educational media application of guidelines and pocketbooks on postnatal emergency management increased knowledge and skills.

Conclusion: The two study groups had a significant effect on increasing the knowledge and skills of midwives in handling postnatal emergencies due to uterine atony.

Keywords: Midwive, Emergency handling, learning media, pocket books, applications

Introduction

The role of health workers will determine the success of development programs in the health sector [1–3]. Midwives are one of the main health workers spearheading health development to accelerate the decline in Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) [4]. For this reason, it is necessary to have midwives who have the ability and skills in clinical procedures, especially in proper management in handling emergency cases of postpartum mothers due to uterine atony with critical analytical skills [5,6].

According to the World Health Organization (WHO), the maternal mortality rate in the world in 2015 was 216 per 100,000 live births, with the highest number in developing countries, namely 239 per 100,000 live births, or 20 times higher than the maternal mortality rate in developed countries, which were only 12 per 100,000 live births [7]. Nearly 75% of all maternal deaths are caused by postpartum hemorrhage, infection (usually after delivery), high blood pressure during pregnancy (pre-eclampsia and eclampsia), and unsafe abortion [8].

Based on the 2012 Indonesian Demographic and Health Survey (IDHS), the maternal mortality rate in Indonesia is 359 per 100,000 live births. It shows a downward trend to 117 per 100,000 live births in 2017, while the Maternal Mortality Rate (MMR) target is according to the Sustainable Development Goals (SDGs) of 70 per 100,000 live births in 2030 [9]. The Maternal Mortality Rate (MMR) in Jambi city in 2018 was 18.86/100 live births, and in 2019 it increased to 46.15/100 live births, although this data is still below the national Maternal Mortality Rate (MMR). Medical factors that are direct causes of maternal death are bleeding by 42%, pregnancy poisoning (eclampsia) 13%, miscarriage (abortion) 11%, infection 10%, delayed labor / prolonged labor 9% and other causes 15% [10].

Obstetric emergencies are life-threatening health conditions that occur during pregnancy or during and after labor and birth [11,12]. The government's effort to reduce Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) is to provide quality basic maternal and neonatal health services,

namely Basic Emergency Obstetrics and Neonatal Services (PONED) at the Puskesmas. However, the maternal and neonatal emergency case services at the PONED Health Center have not been running according to the targeted expectations [13].

The high maternal and infant mortality rate can be caused by the lack of skilled midwives as health service providers, starting from pregnancy to delivery. To improve the knowledge and skills of midwives as service providers, maximum innovation is needed, including the provision of a pocketbook for handling emergency midwifery. This guideline is compiled in the form of a pocketbook equipped with an algorithm to facilitate health workers in handling emergency obstetric cases quickly. The second option can be using an android application that contains an e-book of obstetric emergency case materials, especially in the treatment of uterine atony [14,15].

In Interactive Multimedia, the stimulus appears by presenting exercises related to the material so that the midwife can respond by typing or pressing a button and then facilitated by feedback [16–19]. The existence of an attractive program display can lead to motivation so that aspects of learning readiness will also appear [20–23]. Multimedia applications can assess midwifery/psychomotor skills in basic services to detect emergency cases. Midwives as spearheads for maternal and infant health are good in theory and practice, especially for handling emergency cases. A midwife must provide quality midwifery services to prevent complications and maternal death due to complications [15,24].

The current study aims to evaluate the effectiveness of e-book application model uterine atony management guide and pocket book in improving midwife knowledge and skills in basic care.

Methods

Design

The design used is development, where this method is used to produce certain products and test the effectiveness of these products. Product testing is done by using pre-post Study.

Participants

The research respondents were 64 midwives (divided into 32 people in group 1 and 32 people in group 2) at PutriAyu Health Center and PakuanBaru Health Center who were randomly selected with the inclusion criteria of midwives who provide delivery services and have a working period of more than one year.

Intervention

The variables of this study are the knowledge and skills of the midwife who will be measured before and after the educational intervention using the application of postpartum emergency guidance due to uterine atony and pocketbooks.

The knowledge questionnaire has objective criteria of good or low, uses a Guttman scale, and consists of 15 questions with a rating range of 0-15. The variable of midwifery skill in this study was defined as the ability of the midwife to practice the procedures for handling emergency obstetrics, in this case uterine atony.

The skill questionnaire has good or poor objective criteria, uses a Guttman scale, and consists of 15 question items with an assessment range of 0-15.

The Guttman scale was used in this study because the variables used were nominal scales. The Guttman scale has an important characteristic, which is that it is a cumulative scale and measures only one dimension of a multi-dimensional variable, so that this scale has an undimensional nature. The data obtained are in the form of interval data or dichotomy ratios (two alternatives) [25].

The group 1 received an intervention providing education on using an emergency postpartum guide application due to uterine atony for seven days. The group 2 will receive an education pocketbook on handling emergency postpartum due to uterine atony for seven days. On the first day before

giving the intervention, researchers measured the level of knowledge using a questionnaire in both study groups, as well as the skills of midwives were measured using a questionnaire consisting of the midwife's ability to prepare tools, prepare patients, perform actions according to procedures, evaluate patient responses to actions that have been taken. midwife, and the ability of the midwife to document the actions that have been taken.

The first stage is the research starting from determining the team, determining the development schedule, selecting and determining the scope, structure, and order of the material, determining multimedia specifications, and making storyboards. The second stage is the development stage consisting of expert validation, practitioner validation, and the implementation and evaluation stages. The third stage is the Effectiveness Test.

Blinding

In this study, 2 enumerators were used to collect research data. The previous enumerators did not know the participants because they were students who had been trained by the researcher before collecting data. The enumerators involved in this study were final year students who were about to complete their midwifery diploma, and were tasked with helping researchers collect data in the field by distributing questionnaires, however, the assessment of participants' skills was assessed by the researcher.

Statistical methods

Data were presented as numbers or percentages for categorical variables. Continuous data are expressed as the mean ± standard deviation (SD), or median with Interquartile Range (IQR). The data obtained were analyzed by univariate and bivariate, from the normality test (Kolmogorov Smirnov) obtained abnormal data so that the analysis used the Wilcoxon and Mann Whitney test.

All tests with p-value (p)<0.05 were considered significant. Statistical analysis was performed using the SPSS version 16.0 application.

Ethical Consideration

Registered prospective respondents have signed an informed consent and there is no incentive to participate in the study and the anonymity of participants is guaranteed. Before carrying out data collection, the researcher first took care of ethical permission.

The authors state that this study followed all ethical clearance processes and was approved by the health research ethics committee of Ministry of Health Polytechnic of Jambi, Indonesia, and registration number: LB.02.06/2/167/2021.

Results

The results of the univariate analysis, which aims to determine the frequency of each variable studied, can be seen in the following table:

Variable	Mean±SD	N	(%)
Age	29.40±5.85		
[21- 32[		42	65.6
[32- 41[		18	28.1
[41- 52[		4	6.3
Job status			
Permanent		44	68.8
Contract		20	31.2
Marital Status			
Married		52	81.2
Unmarried		12	18.8
Working of Period			
≤ 5years		38	59.4
> 5 years		26	40.6

Table 1. *Demographic data of participants*

Table 1 shows that the dominant respondents aged 21-32 year are 41 people (65.6%), have employment status as permanent employees as many as 44 people (68.8%), 52 people are married (81.2%), and have a working period of ≤5 years as many as 38 people (59.4%).

Based on the normality test, the statistical test used in this study is non-parametric, with the results as shown in the following table:

Variable	Group 1		Group 2	
	Mean±SD	**Median (Q1-Q3)**	**Mean±SD**	**Median (Q1-Q3)**
Knowledge				
Pre test	7.2±1.17	10 (6.75-11.25)	6.7±1.30	8 (6.75-10.25)
Post test	9.9±1.98	12 (11.75-14)	8.6±1.26	10.5 (9-12)
P-value	0.001 (W)		0.001 (W)	
Skill				
Pre test	6.9±1.18	8.5 (7-9.25)	6.75±1.29	8.5 (7-9)
Post test	9.7±1.85	12.5 (10-14)	8.8±1.47	11 (10-12)
P-value	0.001 (W)		0.001 (W)	

Description: (W) = Wilcoxon test

Table 2. *Differences in mean values and Wilcoxon test results*

Table 2 shows that in each intervention group, group 1 vs group 2, all variables, both knowledge and skills, have increased. In group 1 (e-book emergency guidance application) the median value of knowledge before intervention was 10 with a mean value of 7.2 while in group 2 (pocket book) it had a median value of 8 with a mean value of 6.7. After the intervention, group 1 (e-book emergency guidance application) had a median value of knowledge of 12 with a mean value of 9.9, while group 2 (pocket book) had a median value of 10.5 with a mean value of 8.6.

On the skill variable, in group 1 (e-book emergency guidance application) the median value before

intervention was 8.5 with a mean value of 6.9 while in group 2 (pocket book) it had a median value of 8.5 with a mean value of 6.75. After the intervention, group 1 (emergency guide application e-book) had a median skill score of 12.5 with a mean value of 9.7, while group 2 (pocket book) had a median value of 11 with a mean value of 8.8.

The differences in knowledge and skills between the two study groups are presented in table 3.

Variable	P-value
Group 1 vs Group 2 knowledge	0.080 (M)
Group 1 vs Group 2 skill	0.184 (M)

Description: (M) = Maan Whitney test

Table 3. *Result of Mann Whitney test*

Table 3 shows that the results of the Mann Whitney test prove that there is no difference between the two study groups in improving the knowledge and skills of midwives, in the sense that both groups (group 1 and group 2) are equally effective in improving the knowledge and skills of midwives in handling emergency obstetric cases.

Discussion

The information obtained by previous respondents strongly influences a person's level of knowledge. When the pre-test was carried out, the results obtained showed that the midwife had less knowledge before being given an android application for handling postnatal emergencies and a pocketbook. After the intervention, the respondent's knowledge increased by 71% in the group that received Android educational media. In contrast, the group that received pocketbooks in the group 2 also increased even though it was only 57%.

The Mobile Application, Education for handling postnatal emergencies, provides menus of

information on handling postnatal emergencies, especially animated videos so that participants pay more attention to and master the techniques of handling postnatal emergencies.

Educational media serves to mobilize as many senses as possible to an object to facilitate the perception of the recipient of information [26]. The media will help clarify the information conveyed because it can be more interesting and interactive and overcome the limitations of space, time, and human senses. So that the information conveyed can be clearer and easier to understand according to the purpose for which it will be used [27]. Educational materials can be packaged according to the characteristics of each media used [28]. Today's cellphones not only function as a means of telecommunications but have switched functions to become androids that can do many things [29]. Mobile phones with functions like this can be known as smartphones. Smartphones can assist in medical activities, such as establishing diagnosis and therapy. From various forms of information technology and telecommunications, mobile phones are considered a suitable medium for increasing knowledge in the current developing era. The use of this smartphone is more effective than the module without the application [30,31].

Wahyuni's research [32] on the effect of smartphone applications on a person's knowledge and skills in stimulating the growth and development of toddlers shows an increase in knowledge and skills. Therefore, providing education through interesting media based on Android will make it easier for someone to stimulate independently. In addition to these researchers, other researchers state an effect of using printed media in the form of pocketbooks on increasing the knowledge of postpartum mothers. The study states that print media is the most frequently used and easy-to-reach media, for example, pocketbooks [33]. Pocket books occupy an important position in providing education because they provide clear and practical messages that allow readers to read at any time without the need for the internet to access them and are equipped with images that match the material, making it easier to understand the material [34].

Studies among various healthcare professionals reported mixed results regarding the usefulness of

the e-learning, mobile learning and technology-enhanced learning. A Cochrane systematic review conducted by Vaona et al in [35] compared traditional learning with e-learning and reported that e-learning may make little or no difference in health professionals' behaviours, skills or knowledge. A study conducted by Subhash et al, [36] among medical students reported that smartphones can be effectively used for learning. A study conducted by Snashall et al, [15] among medical students reported that medical apps can be used as an adjunct in medical education, though the evidence remains limited. Furthermore, data analysis showed that the respondent's skills increased after being given an intervention using an application for handling postnatal emergencies 43%. After being given education through a pocketbook in the group 2, the increase was lower than 21.4%. The results of the Mann-Whitney test in this study showed that there was no difference in knowledge and skills between the two study groups regarding postnatal emergency management who received the android application and the group who received a pocketbook. It shows that any media used can improve knowledge and skills because the function of the media is to help facilitate learning for students, provide a more real experience, attract greater attention from respondents because it is not boring, and all senses of respondents can be activated, attract more attention and interest of respondents in learning [37]. The most plausible reason is that the skill of midwives is higher in the group that received application media education compared to pocketbooks because the application media can be studied anytime and anywhere and displays interesting features and videos of emergency obstetric emergencies, especially uterine atony, so that midwives able to understand and remember strongly the material seen and heard [38].

Conclusion

The application model of pocket books and e-books for the management of uterine atony has been proven to be effective in improving the knowledge and skills of midwives in primary care.

Study Limitations

The limitation of this study is that this research involves a small number of samples so that this type of research is a preliminary study, and only involves a certain location, namely 1 area, so it cannot compare the results of this study to the character of the community in different locations. In the future it is necessary to conduct research on a large regional scale and the number of samples in a very large size.

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Competing interests statement

There are no competing interests for this study.

Authors' contribution

TH and NU were responsible for the study conception and design; RO performed the data collection; TH and DN performed the data analysis; NU, and RO were responsible for the drafting of the manuscript; TH and NU made critical revisions to the paper for important intellectual content.

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The Effectiveness of Electric Toothbrushes and Conventional Toothbrushes in Reducing Plaque Scores on School-Aged Children with Mental Impairment: Pilot Study

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ABSTRACT

Introduction: Improving the quality of life of children is one of the goals of the health development program. The growth of children's health is not discriminated against in this scenario. All children with special needs or impairments are covered by child health services, whether at Special Schools (SS), other institutions, or in the community. This study aimed to evaluated the effectiveness of using an electric toothbrushes, compared to conventional toothbrushes, in the reduction of dental plaque score.

Methods: This study was designed as a quasi-experimental study with a pretest-posttest design. All school-aged children with mental impairment in SS Jambi City, Indonesia were included in this study. Overall, 20 children were assigned to the intervention group (n=10) and to the control group (n=10). The Personal Hygiene Performance-Modified (PHP-M) was used to examine plaque index for the assessment of dental and oral hygiene.

Results: In the pretest-posttest, mean difference values in plaque scores were statistically significant in both the intervention (19.50±3.89, $p<0.009$) and control (17.90±1.61, $p<0.001$) groups. A statistically significant reductions was showed in mean post-test plaque index ($p<0.001$) in the intervention group compared to the control group (14.50 ±7.83; 32.80± 13.14, respectively).

Conclusion: When compared to conventional toothbrushes, electric toothbrushes are more effective in reducing plaque scores in mentally retarded children at SS Jambi City.

Keywords: Conventional toothbrush, Electric toothbrush, Plaque score, Children, Mental impairment

INTRODUCTION

Overall health, well-being, and quality of life are all influenced by dental and oral health[1,2]. *Oral health* is a state of a person who is free of chronic oral diseases, facial pain, mouth and throat cancer, infections and sores, gum disease, tooth decay, tooth loss, and other diseases that impair the ability to bite, chew, smile, and talk[3].

Dental and oral health care are crucial components of comprehensive health care[4–6]. Dental and oral health indicators represent the Global Goals for Oral Health 2020. One of the technical activities of the WHO Global Oral Health Program (GOHP) is to offer advice to nations on how to build policies for preventing and promoting dental and oral illnesses[7].

Improving the quality of life of children is one of the goals of the health development program. In this situation, the development of children's health is not discriminatory, and child health services are available to all children with special needs or disabilities, regardless of whether they are in special schools (SS), other institutions, or the community[8–10].

According to the 2012 Susenas (National socio-economic survey for Indonesia), 2.45 per cent of Indonesia's population has impairments [11]. Mental retardation is one group of people with disabilities. Individuals with mental impairment are referred to as having mental retardation (mental retardation). Mental retardation, according to the American Association of Mental Deficiency (AAMD), is defined as a significant divergence from general intellectual functioning that coexists with adaptive behaviour impairments and manifests during the formative period [12].

Indahwati, et al [13] compared the dental and oral hygiene of mentally disabled and deaf students in SS-B and SS-C Tomohon City. According to the findings, mentally disabled kids had lower oral and dental hygiene than deaf students. According to Martens L et al. [14], mentally impaired children's motor abilities at the age of 12 are lower than that of normal children, and mentally disabled children have difficulties holding and using a toothbrush. Rosmawati's [15] study demonstrates that children with special needs have poor dental and oral health with an average Decay Missing Filled-

Teeth (DMF-T) score of three.

Because mentally retarded children endure physical and mental development delays, such as disruptions in sensorimotor coordination, children with special needs require particular health services, one of which is children with special needs for mental retardation [16–19]. According to an interview with the principal of the State Extraordinary School 2 in Jambi City, the students at the school have a joint tooth brushing program after recess directed by the teacher and use a conventional toothbrush. However, the prevalence of dental caries remains high [20].

Brushing the teeth prevents dental caries, and the toothbrush most usually used to remove plaque is a standard toothbrush. Traditional toothbrushes need motor coordination from users, but sensorimotor skills are limited in mentally disabled youngsters.

According to some authors, manual toothbrushing entails the application of much higher pressure than the use of power brushes. Powered toothbrushes appear to be helpful in improving the oral health of physically or mentally handicapped individuals because these devices require minimal hand motion and coordination skills. Some models are designed with each bristle rotating individually and are effective plaque removers [21,22].

Considering the benefits of an electric toothbrush, it can make it easier for mentally handicapped children to clean their teeth and mentally disabled children in SS Jambi City have never used an electric toothbrush, it is vital to investigate the usefulness of conventional and electric toothbrushes in them. This study aims to evaluate the effectiveness of using an electric toothbrushes, compared to conventional toothbrushes, in the reduction of dental plaque score.

METHODS

Study design

A monocentric pilot study, with pretest-posttest design, was carried out from February to July 2022 at State Special School 2 in Jambi City, Indonesia.

Sample size

The minimum sample size required for this study was calculated using the G*Power program, considering effect size of 0.82, α-value of 0.05, power of 0.80, and sample group ratio of 1 [23]. In public health research, the value of sample size strength is at least 80%, therefore, we choose an effect size of 82% (lowest).

Participants

Eligible subject were selected according to the following inclusion criteria: all children in SS Jambi, diagnosed with mild mental retardation [24], aged 10-16 years, Dental caries index ≥ 6.6, unkempt teeth, Dental plaque score 1, bracesless. Children with moderate and severe mental retardation who were unwilling and under ten years old, Dental caries index < 6.6, Dental plaque score > 1, kempt teeth, braces and were excluded. Overall, 20 children participated in the study and were split into Intervention (n=10) and Control groups (n=10) which were randomly defined.

Intervention

After enrollment, participants were randomly assigned into a control group (n=10), in which they used a conventional toothbrush, and in the intervention group (n=10), in which they used an electric toothbrush. In both groups, the dental plaque score was evaluated at baseline (T0) and after seven days (T1). On the day 7th (T1), all participants were advised to brush their teeth and not eat food for 30 minutes before the oral health examination was conducted. All participants were instructed to brush their teeth in the morning after getting up, lunch, and dinner using the same toothpaste for

both study groups. The DMF-T index is an index to assess dental and oral health status in terms of permanent dental caries [25,26]. The DMF-T index is an assessment of the total number of teeth or surfaces that are Decayed/Carious (D), Missing (M), and Filling (F) for everyone. The severity of dental caries at the age of 12 years or older is categorized into five categories, including very low severity with a DMF-T value of 0.0 – 1.0. Then the low severity level with a DMF-T value of 1.2 - 2.6. Moderate severity with a DMF-T value of 2.7 – 4.4. And a high severity level with a DMF-T value of 4.5 – 6.5, and a very high severity level with a DMF-T value of ≥ 6.6

Outcomes

Disclosing solution was used to carry out the procedure for measuring plaque scores. It works by putting a disclosing solution on the subject's tooth surface and recording the findings. Dental and oral hygiene was assessed using PHP-M (Personal Hygiene Performance-Modified). The assessment begins by making imaginary lines on the teeth to form 5 imaginary lines. The lingual and labial surfaces of the teeth were examined. If a plaque was observed in one area, it was given a score of 1. Otherwise, a score of 0 or a sign was provided (-). Plaque assessment findings were calculated by summing each plaque on each tooth surface, resulting in a plaque score for each tooth ranging from 0-to 10. Plaque scores for all teeth can range from 0 to 60, with 0-20 indicating good criteria, 21-40 indicating moderate criteria, and 41-60 indicating poor criteria.

Ethical Consideration

In this study, parents of the children had given their consent to the study. Before carrying out data collection, the researcher first took care of ethical permission. The authors state that this study followed all ethical clearance processes and was approved by the health research ethics committee of Jambi University Faculty of Medicine and Health Sciences, with number: LB.02.06/2/04/2022.

Statistical methods

For categorical variables, data were presented as numbers or percentages. The mean, standard deviation (SD), or median with Interquartile Range are used to express continuous data (IQR). Before the statistical test was carried out, the data normality test was first carried out using Shapiro Wilk test.

The non-parametric test used was Wilxocon to assess pre vs post conventional groups, while the Mann Whitney test was used to assess pre vs pre both study groups. The non-parametric tests were used for non normal data. The Paired T-Test was employed in data analysis to see if there was a difference in mean plaque scores before and after using a traditional toothbrush versus an electric toothbrush. The difference in plaque scores before and after treatment between the conventional toothbrush group and the electric toothbrush group was investigated using the independent T-Test. All tests with a p-value (p) of less than 0.05 were deemed significant. The SPSS version 16.0 application was used for statistical analysis.

RESULTS

Participants characteristics

The general characteristics of children, as shown in Table 1:

Characteristics	N	%
Age (year)		
[10-14[	6	30
[14-17[	14	70
Gender		
Male	9	45
Female	11	55

Table 1. *Characteristics of childrens*

The results of research on childrens with mental retardation SS Jambi City, as shown in Table 2:

Criteria	Control		Intervention	
	Pre	Post	Pre	Post
Good	0 (0.0)	2 (20)	1 (10)	9 (90)
Moderate	1 (10)	3 (30)	8 (80)	1 (10)
Poor	9 (90)	5 (50)	1 (10)	0 (0.0)

Table 2. *Frequency Distribution of Plaque Score Criteria Based on PHP-M Index*

Table 2 shows that before brushing their teeth, the criteria for plaque scores of children were one child (10%) with moderate criteria and nine children (90%) with poor criteria. After brushing their teeth, the criteria for plaque scores of children were two children (20%) with good criteria, three children (30%) with moderate criteria, and five children (50%) with poor criteria.

Before brushing their teeth with an electric toothbrush, the plaque score of children was eight children (80%) with moderate criteria, one child (10%) with good criteria, and one child (10%) with poor criteria. After brushing their teeth, the plaque score of nine children (90%) with good criteria and one child (10%) with moderate criteria.

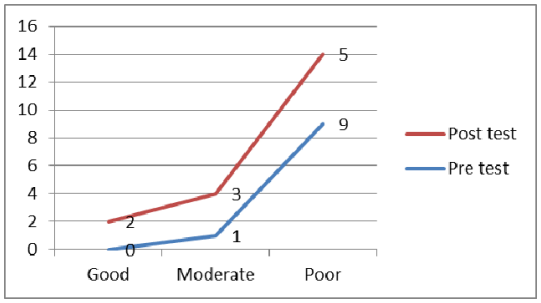

Figure 1. *Plaque score criteria for control group children*

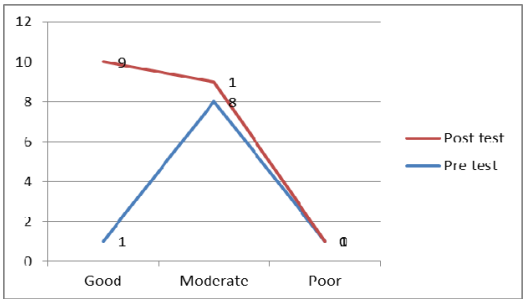

Figure 2. *Plaque score criteria for intervention group children*

Because the sample size was less than 50 children, the Shapiro Wilk test was employed to determine the normality of the data. The sample size in this study was 20 children, as shown in Table 3:

Groups	*Shapiro wilk test*	
	Pre-test	***Post-test***
Conventional Toothbrush	0.014	0.261
Electric Toothbrush	0.123	0.122

Table 3. *Normality Test Results of Plaque Score Data for Children with Mental Requirements in SS Jambi City*

The non-parametric test will be continued since the pre-test results in the conventional toothbrush group had an aberrant distribution of 0.014<0.05, and the post-test data were typically distributed at 0.261 > 0.05, as shown in table 3. In the meantime, the results in the electric toothbrush group were normally distributed, with a pre-test of 0.123 > 0.05 and a post-test of 0.122 > 0.05, respectively, followed by a parametric test.

Variables	N	Conventional Toothbrushes	Electric Toothbrush	*P-value*
		Median (IRQ) Mean±SD		
Before	10	55 (50.75-58)	34.5 (29.75-38.25)	
		52.30± 9.25	32.40 ± 9.44	0.001* (M)
After	10	36 (29-39.25)	12.5 (9.5-17.5)	0.001* (I)
		32.80± 13.14	14.50 ± 7.83	
Difference Value plaque	10	19.50 ± (3.89)	17.90 ± 1.61	
Before vs After				
P-value		0.009 (W)	0.001 (T)	

Description: M (Mann Whitney), W (Wilxocon), T (dependent T-test), I (Independent T-Test)

Table 4. *Test of the Effectiveness of Using Conventional Toothbrushes and Electric Toothbrush on Decreasing Plaque Scores in SS Jambi City*

Table 4 shows that the mean score of plaque before brushing teeth is 52.30, whereas the mean score of children's plaque drops to 32.80 after brushing, indicating a 19.50 decrease in the mean value. The p-value for the paired data effectiveness test is < 0.009, indicating that using a conventional toothbrush to reduce plaque scores in mentally disabled children at SLBN 2 Jambi City is thriving. The mean score of plaque before cleaning teeth is 32.40, that the mean score of children's plaque falls to 14.50 after brushing, and that the mean value decreases by 17.90. The findings of the paired data effectiveness test show that the p-value is < 0.001, indicating that using an electric toothbrush to reduce plaque scores in mentally disabled children in SS Jambi City is beneficial.

The mean post-test value for the conventional toothbrush group is 32.80, while the electric toothbrush group is 14.50, with a P-Value of < 0.001. It indicates the difference in plaque score reduction effectiveness between conventional and electric toothbrushes in mentally disabled children.

The use of electric toothbrushes is more effective in reducing plaque scores in mentally retarded children at SS Jambi City, based on this description.

DISCUSSION

The current study is based on the theoretical basis of the physical condition of children with mental retardation. It has been known that children with mental disorders have mobility limitations, specifically in their extremities. This situation raises question marks about their ability to brush their teeth. Some studies have proven that mentally impaired children's motor abilities are lower than normal children, and mentally disabled children have difficulties holding and using a toothbrush. Children with special needs have poor dental and oral health with an average Decay Missing Filled-Teeth (DMF-T). So in this study, we evaluated the effectiveness of using an electric toothbrushes, compared to conventional toothbrushes, in the reduction of dental plaque score.

We reported that the use of conventional toothbrushes helped lower plaque scores in children with mental retardation in SS Jambi. These findings are in line with research conducted by Sitepu et al. [27] that using soft toothbrushes reduces plaque scores in mentally disabled children and a study conducted by Basith et al. [28] on 40 kids with Down syndrome in India. They observed manual or conventional toothbrushes to eliminate plaque and reduce gingivitis in children with Down syndrome for two months in each group.

In this study, it was also found that electric toothbrushes reduced the number of plaque scores in mentally disabled children in SS Jambi. Electric toothbrushes are effective in reducing OHI-S rates in children with Down syndrome, according to research conducted by Az Zahra et al. [29] and research conducted by Vandana et al. [30] on 30 people with mental problems who were observed for 45 days showed that brushing teeth with an electric toothbrush can reduce the number of mycobacteria in the oral cavity of mentally disabled children.

Plaque removal is the most critical activity for maintaining good teeth and oral health. The most popular tool for eliminating supra-gingival plaque is a toothbrush. However, most people do not clean their teeth correctly, and there is still a lot of plaque on the surface of their teeth [31].

Although electric toothbrushes are more expensive, because of the numerous designs and colors,

they are thought to be more effective in raising the interest of mentally challenged youngsters in brushing their teeth. Electric toothbrushes are also good teeth cleaning equipment for preventing biofilm or plaque from forming on the surface of the teeth [32].

After brushing their teeth with an electronic toothbrush, the growing criteria for plaque scores in youngsters improve. This is due to the fact that the movement utilized in electric toothbrushes is better and more successful in reaching all parts of the mouth, as it is a systematic movement [33].

Mentally retarded children usually have difficulty in imitating the way of brushing their teeth that has been shown because their fine motor development is worse than normal children in general. Furthermore, mentally retarded children's eye and hand coordination is severely impaired. As a result, the child will have difficulties with fine motor movements, which will prevent the youngster from executing actions that demand concentration and complex hand movements [34]. Electric toothbrushes are more effective for intellectually impaired youngsters because of this. Because electric toothbrushes move automatically and children can feel the proper vibration to massage the gum and gingival area, they are a good choice for youngsters. As a result, using an electric toothbrush is more efficient and effective [29].

Although the results of this study have reported that electric toothbrushes are very suitable for use by children with mental retardation, the role of parents is highly expected. Parents or companions are required to take a more active role in encouraging mentally challenged youngsters to clean their teeth twice a day, in the morning after breakfast and at night before bed. We really hope that in the future the production of electric toothbrushes will be further improved at a price that can be affordable by all circles of society.

Based on the results of this study, we strongly recommend the use of an electric toothbrush, especially for students with mental retardation.

CONCLUSION

When compared to electric toothbrushes, electric toothbrushes are more effective in reducing plaque scores in mentally retarded children at SS Jambi City.

Study Limitations

One of the limitations of this study is the very small sample size (a pilot study), we collected data at only one center in Indonesia, which may limit the generalizability of our results to the larger population, so that in the future it is necessary to conduct similar studies in a larger population. Another limitation of the study was that the genders were not matched in the second group, which may have influenced the study results.

Authors' contribution

All authors equally contributed to preparing this article.

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Conflict Of Interest

The authors declare that there was no conflict of interest in this research.

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THE EFFECT OF VIRTUAL EDUCATION ON THE KNOWLEDGE OF POSTPARTUM MOTHERS ABOUT BREASTFEEDING DURING THE COVID-19 PANDEMIC: QUASI-EXPERIMENTAL DESIGN

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Abstract

Introduction: Postpartum mothers and newborns are a group that is vulnerable to COVID-19. Due to the COVID-19 pandemic, access to essential services such as breastfeeding counseling in hospitals, health clinics, and home visits has been disrupted. Postpartum mothers will immediately breastfeed. Therefore there is a need for knowledge, appropriate information, and support to provide breast milk, especially during the COVID-19 pandemic. This study aims to analyze the effect of virtual counseling on the knowledge of postpartum mothers during the COVID-19 pandemic at the Delima Midwife Clinic in Jambi City.

Materials and Methods: The current study utilized a quasi-experimental design with one group design pretest-posttest approach. This research was conducted in January-October 2021 and involved 75 postpartum mothers. This study using the zoom app. and questionnaire. Data analysis using Wilcoxon statistical test.

Results: The results showed an increase in knowledge where before being given virtual education, most of the respondents' knowledge was in the Poor category, as much as 80% (mean 6.18). After the intervention, the knowledge of most respondents in the Good category was 46.7% (mean 12.15) with P-value <0.05.

Conclusion: The study concludes that virtual counseling significantly affects the knowledge of postpartum mothers about breastfeeding during the COVID-19 pandemic.

Keywords: Postpartum Mothers, Breastfeeding, COVID-19 pandemic, Counseling, Virtual.

INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). SARS-CoV-2 is a new type of coronavirus that has never been previously identified in humans [1,2]. There are at least two types of coronaviruses known to cause diseases that can cause severe symptoms, such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) [3]. The average incubation period is 5-6 days, with the most prolonged incubation period being 14 days. In severe cases of COVID-19, it can cause pneumonia, acute respiratory syndrome, kidney failure, and even death [4,5].

The spread of COVID-19 has reached almost all provinces in Indonesia, with the number of cases and deaths increasing. This condition impacts the political, economic, social, cultural, defense and security aspects, as well as the welfare of the people in Indonesia [6]. Indonesia reported its first case of COVID-19 on March 2, 2020, and the number continues to grow until now. The data on confirmed cases of COVID-19 in Indonesia as of October 21, 2021, were 4.237.834 people, 143.120 people died, and patients who had recovered were 4.079.120 people [7]. Meanwhile, in Jambi Province, COVID-19 cases increased sharply. As of October 3, 2021, the Jambi Provincial Government recorded 29.616 positive confirmed cases of COVID-19, 768 people died, and 28.476 people recovered [8].

Postpartum mothers and newborns are a group that is vulnerable to the COVID-19 virus [9,10]. During the COVID-19 pandemic, access to essential services such as breastfeeding counseling in hospitals, health clinics, and home visits has been disrupted [11,12]. The amount of inaccurate information and news circulating about the safety of breastfeeding has reduced the number of breastfeeding mothers because mothers are afraid of transmitting diseases to their babies even though this is the most appropriate moment to provide the best intake for babies through breastfeeding. After all, breast milk contains immune substances which protect children from infections and chronic diseases and reduces the chances of suffering from health problems later in

life. The Covid-19 virus has never been found in breast milk [13,14].

Social restrictions during the COVID-19 pandemic require staying at home so that continuous care cannot be carried out, both health workers to make visits and mothers and babies to check their health status at the nearest health service. The impact of this situation can cause stress and worry for postpartum mothers who are still adapting to breastfeeding activities. Breastfeeding mothers need to continue to get support in the form of assistance to overcome problems during the breastfeeding process [2,15].

The current state of the COVID-19 pandemic has made it difficult for postpartum mothers to get information and consult face-to-face due to the strict rules of physical distancing. This condition resulted in a decrease in the number of visits by postpartum mothers to health workers. The limitations of accessing information on exclusive breastfeeding from health workers can be overcome by providing health promotions delivered via Telemedia, where postpartum mothers can communicate virtually and see some presentation materials and videos of good and correct breastfeeding techniques [16,17].

Health promotion through Telemedia/online is expected to increase the knowledge of postpartum mothers about exclusive breastfeeding and sound and correct breastfeeding techniques. This online learning for postpartum mothers is expected to help postpartum mothers to obtain information and consult during the COVID-19 pandemic.

This study aims to examine the effect of Virtual Counseling on Postpartum Mother's Knowledge of Breastfeeding during the Covid-19 Pandemic at the Delima Midwife Clinic in Jambi City.

Method

Trial design

The current study utilized quasi-experimental design with one group design pretest-posttest approach.

Participants

This research was conducted in January-October 2021 and involved 75 postpartum mothers who were randomly selected and met the sample inclusion requirements, such as breastfeeding mothers, mothers who have never participated in counseling activities about breastfeeding, and who have the Zoom app.

Intervention

The research variable is the knowledge of postpartum mothers. Before the intervention was given, the researcher first measured the level of knowledge of postpartum mothers (pre-test). After being given the intervention, the researcher again measured the level of knowledge of postpartum mothers (post-test). In this study, the intervention model provided was virtual education about breastfeeding, which was carried out once for 1 hour, i.e., 45 minutes of material delivery and 15 minutes of discussion). In this study, researchers explain the principles of breastfeeding, including the correct way of breastfeeding. The researcher presented the material with a poster or picture of the correct breastfeeding technique.

The knowledge questionnaire consists of 33 questions with correct and incorrect answer choices. If the postpartum mother answered correctly, she was given a score of 1; if the answer was wrong, she was given a score of 0. The range of scores obtained was between 0-33. The questionnaire used the Guttman scale. The contents of the postpartum mother's knowledge questionnaire included the benefits of breastfeeding, breastfeeding techniques, breastfeeding positions, correct breastfeeding steps, duration and frequency of breastfeeding, milk release, milk storage, breast care, nutrition during breastfeeding, and problems in breastfeeding.

The Guttman scale has an important feature where it is a cumulative scale and only measures one dimension of a multidimensional variable; therefore, this scale is dimensionless. The data obtained are interval data or dichotomous ratios (two alternatives) [18].

Researchers did not try out the knowledge questionnaire because this questionnaire was adopted from Nalsalisa's study [19]. The results of the validity test obtained a p-value <0.05 on 33 questions. For the reliability test, this questionnaire is reliable because the value of r count> r table is reliable. The researcher has worked as a lecturer and researcher for 10-15 years and has Master and Doctoral degrees. The researcher has done much research in the health sector and has compiled many questionnaires, so the researcher prepared a questionnaire for this study. Before the research was conducted, the questionnaire was tested on ten postpartum mothers, and the results indicated that two questions had to be replaced because they were invalid.

Outcomes

This study has produced a description of the knowledge of postpartum mothers before and after virtual educational interventions and the effect of virtual education interventions on postpartum mothers' knowledge.

Sample size

75 postpartum mothers who have been calculated using the Slovin formula at a precision (d) = 0.1, the total population is 307 people. The study population, also known as the target population in this study, is the number of postpartum mothers who visited the Delima Midwife Clinic, Jambi City, Indonesia, in 2020, totaling 307 people.

Ethical Consideration

No economic incentives were offered or provided for participation in this study. In this study, because the subject was still a minor so the researcher had asked for and obtained parental consent so that their child could participate in the study. The study was performed in accordance with the ethical considerations of the Helsinki Declaration. This study obtained ethical feasibility under the

Health Research Ethics Commission of the Ministry of Health, Jambi, and registration number: LB.02.06/2/161/2021.

Statistical analysis

Data are presented as numbers and percentages for categorical variables. Continuous data were expressed as mean ± standard deviation (SD) or median with Interquartile Range (IQR). To see the distribution of research data, the Kolmogorov Smirnov test was used. Then proceed with bivariate analysis using the Wilcoxon test. All tests with p-value (p)<0.05 were considered significant. Statistical analysis was performed using the SPSS version 16.0 application.

RESULTS

The characteristics of respondents in this study include age, education, employment status and parity. The following is the frequency distribution of the respondents' characteristics in this study:

Characteristics	N	%
Age		
• [18 – 25 [	6	8
• [25 – 32 [	10	13.3
• [32 – 38 [	59	78.7
Education		
• Basic	2	2.7
• Junior school	10	13.3
• High school	48	64
• Associate degree	5	6.7
• Bachelor	10	13.3
Employment		
• Working	9	12
• Not working	66	88
Parity		
• Primipara	24	32
• Multipara	51	68

Table 1. *Frequency Distribution of Respondents Characteristics*

The majority of respondents are in the age range of 32-38, have high school education, do not work and have multiparous status.

Knowledge	Pre	Post
Poor	60 (80%)	16 (21.3%)
Sufficient	11 (14.7%)	24 (32%)
Good	4 (5.3%)	35 (46.7%)

Table 2. *Distribution of knowledge before and after interventions*

Most of the respondents' knowledge before the intervention was in the Poor category, as much as 80%. After the intervention, the knowledge of postpartum mothers was mainly in the Good category, as much as 46.7%.

Table 3 shows that the Kolmogorov Smirnov statistical test results obtained a significant value of knowledge at the pretest and posttest virtual education, each less than 0.05.

	Kolmogorov Smirnov test		
Knowledge	***Kolmogorov smirnov***	***df***	***Sig.***
Pretest	2.807	75	<0.0001
Posttest	1.497	75	0.023

Exp. *) Significant value < 0.05 (reject normality)

Table 3. *Normality Test Results of Knowledge pretest and posttest virtual education*

The knowledge data at the pretest and posttest virtual education not normally distributed. Therefore, the statistical difference test was tested using Wilcoxon (Table 4)

Knowledge	Mean±SD	Median IQR (Q1-Q3)	P-value
Pretest	6.18±3.09	5 (4-6)	<0.0001
Posttest	12.15±4.91	13 (7.5-15.5)	

Table 4. *Average Knowledge Pretest and Posttest Virtual Education*

Table 4 shows that knowledge before giving virtual education has a mean value = 6.18, while after giving virtual education, it increases to 12.15, with P-value <0.05.

DISCUSSION

Postpartum conditions cause a partial decrease in immunity due to physiological changes during pregnancy, making postpartum women more susceptible to viral infections. Therefore, the COVID-19 pandemic will likely cause severe consequences for postpartum mothers. Social distancing measures are effective in reducing disease transmission. It also applies to postpartum mothers to limit themselves to not being exposed to the outside environment, let alone traveling to pandemic areas [20,21]. The risk of postpartum mothers being infected with COVID-19 is one of them when visiting a postnatal check-up at a midwifery clinic or hospital, so mothers must increase their vigilance by continuing to be disciplined in the use of PPE [21,22]. Postpartum mothers can limit visits to obstetric clinics or hospitals by conducting online consultations, actively self-checking for signs and dangers during pregnancy, and only making visits when things are worrying. This study aims to analyze the effect of virtual education on postpartum mothers' knowledge about breastfeeding [13,23]. Based on the univariate analysis, it is known that most of the respondents have less knowledge (80%), and a small portion (5.7%) have good knowledge. Health promotion cannot be separated from activities or efforts to convey health messages to communities, groups, or individuals.

There are still many mothers who say that mothers who are confirmed positive for COVID-19 cannot breastfeed their babies directly. The world Health organization still recommends that mothers continue breastfeeding their babies but must follow hygiene procedures. SARS-CoV-2 has not been detected in mothers with suspected or confirmed COVID-19, and there is no evidence that the virus is transmitted through breast milk [22,24].

Postpartum mothers who have good knowledge increased to 42% after counseling. The mean value

of knowledge before counseling was done was 6.18, then after virtual counseling, there was an increase in the mean value of postpartum mothers' knowledge about breastfeeding to 12.15.

There is an increase in knowledge of breastfeeding mothers about breastfeeding during the COVID-19 pandemic. It is hoped that changes in behavior will occur, such as giving exclusive breastfeeding to their babies because concerns about transmission of COVID-19 through breast milk have been answered, namely that it is not proven to transmit COVID-19, and breastfeeding mothers can also provide breast milk exclusively with due observance of health protocols. Thus, even though the baby is in a pandemic, the baby's needs are still met with the mother giving exclusive breastfeeding even though the mother is still working and can still provide exclusive breastfeeding [25].

The statistical test results obtained a P value < 0.05, so it can be concluded that virtual counseling affects postpartum mothers' knowledge about breastfeeding during the COVID-19 pandemic. Silalahi's research (2012) reported differences in the level of knowledge of postpartum mothers after being given counseling. There was an effect of counseling on exclusive breastfeeding on mothers' knowledge about exclusive breastfeeding.

This finding strengthens the previous finding that reported that knowledge for the intervention group obtained a mean value of 58.89. In contrast, the control group obtained a mean value of 45.47, with P-value = 0.012, meaning that counseling affects the knowledge of postpartum mothers in the Timbusseng Village Work Area, Pattallassang District, Kab. Gowa [26].

Extension activities can be carried out with two-way communication where the communicator (extension) provides the communicant opportunity to provide feedback on the material. This interactive discussion on two-way communication is expected to trigger the desired behavior change. This health education's success is determined by the material presented and the interpersonal relationships between communicators and communicants [16,27]. An indicator of the success of extension that can be measured quickly is the similarity of meaning or understanding of what is conveyed by the communicator and accepted by the communicant [24,28].

Virtual counseling media is an alternative for health workers to consult postpartum mothers during the COVID-19 pandemic to reduce the risk of spreading COVID-19 disease, which can endanger pregnant women and neonates. The Good knowledge of the mother determines the correct breastfeeding technique. Good knowledge about the importance of breastfeeding and ways to breastfeed will form a positive attitude, and then correct breastfeeding behavior will occur [24,29].

CONCLUSION

Virtual counseling has a significant effect on the knowledge of postpartum mothers about breastfeeding during the COVID-19 pandemic.

STUDY LIMITATIONS

There are limitations to the number of research samples, and samples only come from one location; therefore, the results of this study cannot be differentiated from samples or participants with different characters in other locations. Future research must involve many samples, and research locations must also be heterogeneous.

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CONFLICT OF INTEREST

The authors report no conflict of interest.

AUTHORS' CONTRIBUTION

All authors equally contributed to preparing this article.

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THE EFFECT OF PARENTAL HOLDING ON PAIN LEVELS INFANT DURING MEASLES IMMUNIZATION: QUASI-EXPERIMENTAL STUDY

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Original article

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ABSTRACT

Background: Immunization is the most effective and efficient public health effort in preventing various dangerous diseases, one of which is measles immunization. In practice, it is very closely related to needles that can cause anxiety, pain, avoidance, and even suffering in children when visiting health services to get vaccines. Parental care is a form of non-pharmacological intervention to treat pain. The purpose of this study was to determine the effect of parental maintenance on infant pain levels during measles immunization.

Methods: Quasi-experimental research method with pretest posttest control group design. The number of samples was 42 respondents who were divided into an intervention group and a control group in the working area of the Taman Bacaan Health Center Jambi city, Indonesia. This research was carried out in May-July 2021. The instrument used is the Face, Legs, Activity, Cry and Consolability (FLACC) scale and parental holding Standard Operating Procedures (SOP). Research statistical test with paired t test and independen t test.

Results: The results obtained p-value < 0.0001 with the level of pain in infants during measles immunization in the intervention group with an average of 5.52 and a standard deviation of 0.928, while the level of pain in infants during measles immunization in the control group with an average of 8.24 and standard deviation 1.044.

Conclusion: The parental grip in the position of holding the baby facing the chest with the parents affects the baby's level of pain during measles immunization. It is hoped that parental holding can be used as an alternative during immunization so that babies are more comfortable and can reduce pain.

Keywords: Parental Holding, Pain Management, Complementary Therapy, Measles Immunization

INTRODUCTION

Immunization is a public health effort that is most effective and efficient in preventing various dangerous diseases [1,2]. The magnitude of the role of immunization has been recorded in history to save the world community from illness and even death from diseases such as smallpox, polio, tuberculosis, hepatitis B, diphtheria, including measles [3–5]. Immunization is an effort to actively generate or increase a person's immunity to disease and if exposed to the disease, he or she will not get sick or experience mild illness [6].

Immunization is a critical agenda in children's health. The World Health Organization (WHO) has set a goal that all countries should reach 90% coverage of all vaccines by 2020. The coverage rate considerably varies among countries. Today there are still 19.4 million unvaccinated children globally. Among those children, 60% come from 10 countries, and Indonesia is on that list [7,8].

In the Indonesian Health profile, the number of diseases that can be prevented by immunization for tetanus neonatorum increased in 2019, accompanied by suspected measles which also increased from 8,429 cases in the previous year, to 8,819 suspected cases of measles. Complete basic immunization coverage for infants from the 2019 target is expected to be 95% where in 2017 it reached 80% but in 2018 it decreased to 68.75% in districts/cities [7].

Immunization, which is mostly given in the form of injections, will create new problems. Pain and trauma due to immunization injections are effects that need attention in addition to other unexpected side effects. These side effects can be one of the causes of the lack of immunization coverage [8,9]. Parents assume that repeated immunizations can make children feel pain, which in turn contributes greatly to refusal, non-adherence to schedules, and delays in immunization [10]. Anxiety and pain due to injection are complaints that are often conveyed by both parents and children due to immunization. This condition makes parents reluctant to come to health services afterwards [8,11]. More than 90% of children experience severe stress during immunization which results in parents not complying with the existing schedule. The results of studies in America show that 24% of

parents and 63% of children are afraid of needles when immunizations affect 7-8% of children with incomplete immunization status [8]. Needle phobia is estimated to reach 10-20% of the population [11].

One type of non-pharmacological intervention that has been developed to treat this pain is parental holding with hug therapy. Parental holding involves close contact between parent and baby, with the baby in the parent's arms, facing each other and parallel, and there is eye contact between the two. Parental grip may reduce the response to procedures that are painful for the baby, such as exercise [9]. Parents can get the attention and attention of their babies, this is in line with the recommendations from WHO to give special attention to babies during technique. According to Sari [9] hugs from parents to their children will help the pituitary gland secrete endorphins which function to improve the immune system, improve the ability to reduce pain, besides that the baby will avoid fear, anxiety and stress. In addition, the comfortable feeling that arises due to the mother's embrace is able to make the baby's body to secrete endorphins. Endorphins can improve mood, reduce anxiety, causing muscles to relax, and calm. So that the level of pain experienced by the baby will decrease [10,11].

According to Modanloo et al. [12] vaccination for early childhood is one of the most important public health interventions therefore clinical practice guidelines recommend the use of pain management strategies for infants during vaccination. Immunization is closely related to needles that can cause anxiety, avoidance, and even distress in children during visits to health services to get vaccines [13]. Medical procedures performed using needles such as immunizations are a source of pain for children. In addition, children will also feel anxiety and fear that become trauma which will continue into adulthood [14].

Pain is a protective mechanism that alerts the body that there will be tissue damage in the body that can affect survival [15]. This procedure is a painful procedure for children especially when immunized without adopting pain management [16]. Young children have difficulty understanding

pain and procedures performed by health workers. Toddlers have difficulty interpreting the pain experienced, usually the toddler responds to pain with crying or facial expressions and simple words for toddlers who are able to speak [17].

Wahyuni & Suryani [18] resulted in an average pain scale before being given parental holding was 7.8 with a standard deviation of 1.4 and a minimum - maximum value range 5.0-10.0, and the average pain scale after parental holding was given was 3.6 with a standard deviation of 1.6 and a minimum-maximum value range of 1.0-7.0. With the result that 12 respondents who received parental holding intervention experienced a decrease in pain scale by a difference of 4, and the results of the sample t test were obtained $p < 0.05$, meaning that there is a difference in pain scale before and before being given parental holding.

Research Sri Rahyanti et al [19] in Jakarta using a randomized clinical trial method and involving 34 respondents aged 1 to 4 years who were included in the intervention group and the control group, it was found that parental holding and upright position results in significant differences in pain scores in children were compared with the group that was not given parental holding and upright position with a p-value < 0.0001.

The results of the preliminary study at the time of giving technique midwives will perform a distraction technique (guided imagery) on the baby by saying there is something interesting on the other side, hidden the syringe used and giving breast milk after the exercise.

The problem in this study was pain management in infants during immunization is still not optimal and has an impact on ongoing trauma into adulthood. Is there any effect of parental holding on the baby's pain level during measles immunization?

The purpose of the study was to carry out parental holding it would affect the level of infant assistance during measles in the work area of the Taman Bacaan Health Center Palembang. The benefits are in order to provide comfort for babies during immunization and to make standard operating procedures (SOPs) with parental holding techniques that can be applied by health

workers.

METHODS

Study design

This study used quantitative research methods with a *quasi-experimental* design and a pre-test post-test control group design.

Study Population

The population and sample are all infants under the age of 1 year given measles immunization in the working area of Taman Bacaan Health Center conducted on May-July 2021.

Inclusion criteria consisted of infants aged 9-12 months, The baby's parents agree that their child is a respondent, and the baby's parents agree to provide parental holding. And the exclusion criteria include babies who are not directly accompanied by their parents, babies who are not directly accompanied by their parents crying and not being soothed before the injection, sick or contraindication of immunization, and parents who refuse to be respondents.

Sample size

The numbers of samples involved were 42 participants who were chosen randomly or randomly from the population. The sample was divided into an intervention group of 21 respondents in (given parental holding by hugging) and 21 respondents in the control group (held and on the lap by his mother). Calculation of the number of samples was determined using the Slovin formula [20], where from a population of 47 people, d = 0.05, the total sample was 42 people. The research population, also known as the target population in this study, was the number of toddlers aged <1 year who visited the Taman Bacaan Health Center in Jambi City, Indonesia, conducted on May-July 2021, totaling 47 people.

Instruments

The independent variable is parental holding, and the dependent variable is the level of pain in infants during measles immunization. Pain variables were measured using the FLACC Pain Assessment Tools instrument. The FLACC Behavioral Pain Scale is a pain assessment tool for children less than three years of age or with cognitive impairment. FLACC is an acronym for Face, Legs, Activity, Cray, and Consolability (face, legs, activity, crying, and controllability). The five components are totaled, and the severity of pain is determined from a score of 0-10.

The assessment consisted of facial expressions (0-2), leg movements (0-2), activity (0-2), crying (0-2), ability to be entertained (0-2). The results of the behavioral scores are: 0: No Pain, 1-3: mild pain/mild discomfort, 4-6: moderate pain and 7-10: severe pain/severe discomfort. Measurement of the pain level variable was carried out before the intervention (pre-test) and 15 minutes after the intervention (post-test).

The type of intervention in this study was parental holding by hugging (Intervention group), and held and on the lap by the mother (control group). Both of these interventions were only carried out once when the child was given measles immunization.

Ethical Consideration

Prior to the implementation of measles immunization, the researcher first asked the mother's willingness to provide informed consent. After the consent became the research sample, the baby's mother signed the informed consent. No economic incentives were offered or provided for participation in this study. The study protocol matched the Declaration of Helsinki ethical guidelines for clinical studies. This research has been approved by the Health Research Ethics Commission of the Health Polytechnic of the Jambi Ministry of Health with the number LB.02.06/2/51/2021.

Statistical analysis

Data are presented as numbers and percentages for categorical variables. Continuous data were expressed as mean ± standard deviation (SD) or median with Interquartile Range (IQR). To see the distribution of research data, the Kolmogorov Smirnov test was used. The research data is normally distributed. Then proceed with bivariate analysis using the Paired t test. The Paired t test was used to determine the effect of Parental holding on infant pain level during measles immunization. Then to analyze the differences between the intervention and control groups, using the Independent t test. All tests with p-value <0.05 were considered significant. Statistical analysis was performed using the SPSS version 16.0 application.

RESULTS

The research respondents were 42 respondents, which were divided into 21 respondents in the intervention group and 21 respondents in the control group. The general description of the frequency distribution by gender and age can be seen in the following table:

Variable	Intervention Group		Control Group	
	n	%	n	%
Sex				
Man	7	33.3	8	38.1
Woman	14	66.7	13	61.9
Age				
9 months	2	9.5	5	23.8
10 months	10	47.6	6	28.6
11 months	9	42.9	10	47.6

Table 1. *Frequency distribution of general characteristics of the sample*

Based on table 1, it is known that in the intervention group most of them were female, namely 66.7%, and in the control group most were female, namely 61.9%. While the age variable in the intervention group was mostly 10 months old, namely 47.6%, and in the control group most were 11 months old, namely 47.6%.

To find out the distribution of research data, a normality test of the data was carried out, presented in table 2.

Variable	N	Kolmogorov smirnov	P-value
Intervention Group	21	1.144	0.146
Control Group	21	0.940	0.340

Table 2. *Data normality test*

Based on table 2, the research data obtained were normally distributed with p-value > 0.05.

Bivariate analysis aims to explain or describe the dependent variable, namely the level of infant pain during measles immunization in the intervention group and the control group.

Variable	N	Mean ±SD	Median (Q1-Q3)	p-value
Intervention Group (pretest-posttest)	21	5.52 ±0.928	5 (5-6)	<0.0001
Control Group (pretest-posttest)	21	8.24 ±1.044	8 (7-9)	<0.0001
Intervention vs Control	42	6.88 ±1.684	7.00 (5.25-8)	<0.0001

Table 3. *Analysis of the effect of parental holding on infant pain levels*

Based on table 3, it is known that the results of paired t test have the effect of parental holding on the baby's pain level during measles immunization with a p-value < 0.0001 ~~(p value <0.05)~~. The mean value of the two groups (intervention and control) is 6.88. The result of independent t test is a p-value <0.05, it means that there is a difference in the effect of the two interventions on the pain level of infant during measles immunization.

DISCUSSION

The purpose of the study was to carry out parental holding it would affect the level of infant assistance during measles in the work area of the Taman Bacaan Health Center Palembang. In this study, the age of the respondents was between 9-11 months; based on Minister of Health regulations no. 42 of 2013 the first measles immunization was given to infants aged 9 months. Measles immunization is given in 2 doses, namely when the baby is 9 months old (as basic immunization), and when the baby is 9 months old (as basic immunization). when the child is 2 years old (as a follow-up immunization) [21]. According to Perry et al. [17] young children have difficulty understanding pain and procedures performed by health workers. Toddlers have difficulty interpreting the pain experienced, usually the toddler responds to pain with crying or facial expressions and simple words for toddlers who are able to speak. Babies have not been able to express pain with words; therefore the level of pain in infants is measured using the FLACC scale which is seen through the baby's responses in the form of behaviour, facial expressions, crying, and movements.

In this study, the observed of level pain was in infants aged 9-12 months, babies could not show the pain response, it was necessary to have skills of health workers to assess the baby’s pain level based on the FLACC scale, besides that most mothers said they were afraid to accompany the baby directly during immunization. In this study, it was stated that there was a significant decrease in the infant's pain level during measles immunization with a p-value < 0.0001 and the minimum and

maximum pain values obtained from the control group (who were not given parental holding) of 7.00 and 10.00. to the minimum - maximum values in the intervention group (given parental holding) of 4.00 and 7.00.

This study is in line with research Modanloo et al. [12] which states that pain management strategies during vaccination can be carried out by holding. While in this study, parental holding is done by hugging or hugging. According to Sari [9] hugs from parents to their children will help the pituitary gland secrete endorphins which function to increase the immune system, increase the ability to reduce feelings of anxiety. In addition, the baby will avoid fear, anxiety and stress. Increased endorphins can affect mood, reduce anxiety, cause muscles to relax, and calm down, therefore, the level of pain experienced by the baby will decrease. Endorphins are natural substances produced by the body whose job is to inhibit the passage of pain sensations from the traumatized body part to the brain. Everyone's endorphin levels are different, this causes different responses to the same type of pain [22]. Besides being useful for inhibiting pain, endorphins also have other benefits, namely to regulate hormone production, reduce persistent aches and pains, and control stress [23,24]. In line with research Qiu et al. [25] which states that endorphins are endogenous opioids that are released in response to pain and increase pain inhibition when an organism is exposed to stress or painful stimuli (acute pain). In this study, painful stimuli in the form of measles immunization injections can affect the release of endorphins.

This study is in line with research Dewi et al. [26] which states that babies who given parental holding will feel a sense of love and comfort from their parents, so that the fear and anxiety they experience will be reduced because of their parents holding them. Parental hugs provide a sense of comfort and reduce pain levels in children.

In this study, the difference in the level of infant pain in the intervention group and the control group can be seen from the pain response felt by the baby, as evidenced by changes in facial expressions, grimacing, body squirming, crying, body rigidity, restlessness, to an increase in stress

hormones. Parental holding involves close contact between parents and babies, with the baby in the parent's arms, facing each other and parallel, and there is eye contact between the two. Parental holding may reduce the response to procedures that are painful for the baby, such as immunizations. Parents can distract and calm their babies, this is in line with the recommendations from WHO to pay special attention to babies during immunization. When babies are immunized using injections, parental holding by hugging other forms of touch that can minimize pain, make babies feel more comfortable and good, so that it has an impact on the baby's quality of life by getting a direct touch of love from the parents [18].

Parental holding comfort to the baby and mother at the time of immunization with the injection technique, so that immunization does not have an impact on causing trauma to babies until they are adults for fear of being injected. In addition, it can be used as an alternative effort for health workers when giving immunizations to minimize level pain in infants.

Researchers would like to convey that these two interventions have been proven to reduce immunization pain in children. although in the independent t test the two interventions had differences in reducing the pain scale in immunized children. This means that the way the mother holds or hugs the child during immunization has a calming effect on the child.

The strength of this study compared to previous studies lies in the comparison of the effects of 2 different interventions on the pain scale during measles immunization in children which was not carried out in the previous study, which only used 1 intervention in the form of parental holding.

CONCLUSION

Parental holding has an effect on reducing pain in infants when given measles immunization by providing a sense of comfort, and reducing distress in infants. So that health workers can use this method as an alternative in reducing pain levels in infants when immunized. Parental holding can be used as a basis in formulating policies or standard operating procedures (SOPs) for the management

of measles immunization, namely the provision of parental holding as one of the procedures in reducing pain levels in infants during immunization. With this policy, it is hoped that health workers will apply techniques to reduce pain in infants when immunized against measles.

LIMITATION OF STUDY

One of the limitations of this study is the very small sample size (a pilot study). The research location only involves one region, therefore it cannot compare the results of similar studies in different populations. In addition to these two things, the environmental conditions where the vaccination is carried out must be designed not to have little effect on the research results. Likewise, the clothing of health workers must be adapted because usually, children are treated at hospitals or trauma clinics in white clothes.

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CONFLICT OF INTEREST

The authors report no conflict of interest.

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AUTHORS' CONTRIBUTION

All authors equally contributed to preparing this article.

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THE EFFECTIVENESS OF AUDIO HYPNOTHERAPY IN REDUCING POSTPARTUM DEPRESSION DURING NEW NORMAL

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ABSTRACT

Background: Postpartum depression is a life-threatening mental health disorder and occurs in 10-15% of women. “Globally, the incidence of postpartum depression reaches 10-15%. There are few reports in countries such as Malta, Malaysia, Austria, Denmark and Singapore. While in other countries such as Brazil, South Africa, Taiwan, Korea, Italy, and Costa Rica, symptoms of postpartum depression are reported to be quite high”. “Based the criteria of the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) and the Edinburgh Postnatal Depression Scale (EPDS). Audio hypnotherapy, which is the provision of positive suggestions delivered through MP3, is a method to reduce the level of postpartum depression. This study aims to determine the effectiveness of audio hypnotherapy in reducing postpartum depression during the new normal.

Materials and Methods: This quasi-experimental study used a pretest-posttest design involving 60 postpartum mothers with a history of normal delivery at 2 Midwife's clinics in Palembang City and 1 Midwife's clinic in Aceh. Postpartum depression levels were assessed using the Edinburgh Postnatal Depression Scale (EPDS). Data analysis used Paired Samples Test to determine differences in postpartum depression levels before and after listening to Hypnotherapy audio.

Results: There was a decrease in postpartum mothers' depression level after listening to hypnotherapy audio for ± 2 weeks. Depression incidence before giving audio hypnotherapy has a mean value = 11.15, while after giving audio hypnotherapy, it increases to 8.90, with P-value <0.05.

Conclusion: Audio hypnotherapy therapy has proven to be effective in reducing the incidence of depression in postpartum mothers.

Keywords: Audio Hypnotherapy, depression, Post-partum mother

INTRODUCTION

Antepartum Depression (APD) and Postpartum Depression (PPD), are disorders characterized by mood swings during pregnancy and after childbirth, which have a negative impact on the physical and mental health of mothers and children [1,2]. Melville et al [3] in their study reported that prevalence rates ranged from 4.8% to 18.4% for mild depression, and from 5.1% to 12.7% for severe depression. Globally, the incidence of postpartum depression reaches 10-15%. There are few reports in countries such as Malta, Malaysia, Austria, Denmark and Singapore. While in other countries such as Brazil, South Africa, Taiwan, Korea, Italy, and Costa Rica, symptoms of postpartum depression are reported to be quite high. A study in India, involving 359 primiparous mothers, reported an 11% incidence of postpartum depression [4,5]. Approximately 70% of new mothers have mild depressive symptoms which generally peak in the 2 to 5 days after delivery. These symptoms usually begin to subside spontaneously within 2 weeks, but if not detected immediately and treatment is delayed, it can develop into postpartum depression [6].

Most pregnant women who face the birth process experience feelings of anxiety, even depression. Factors causing postpartum depression consist of biological factors, characteristics and background of the mother. Levels of the hormones estrogen (estradiol and estriol), progesterone, prolactin, cortisol which increase and decrease too quickly or too slowly are biological factors that cause postpartum depression [7]. The greater the decrease in estrogen and progesterone levels after childbirth, the greater the tendency for a woman to experience depression in the first 10 days after giving birth [8]. The estrogen and progesterone exert a suppressive effect on the activity of the monoamine oxidase enzyme. This enzyme can inactivate both noradrenaline and serotonin, which play a role in mood and depression. Estradiol and estriol are the active forms of estrogen formed by the placenta. Estradiol functions to strengthen the function of neurotransmitters by increasing the synthesis and reducing the breakdown of serotonin. Therefore, theoretically the decrease in estradiol levels due to childbirth plays a role in causing postpartum depression [2,6,9,10]. Biological

causative factors are difficult and rarely measured in terms of maternal depressive symptoms [11]. Other factors that influence maternal depressive symptoms described in several studies include interpersonal variables (neural disorders, poor life experiences), social variables (marital dissatisfaction, lack of social support), and clinical variables related to pregnancy (risk in current pregnancy, problems with previous pregnancy) [12].

Antepartum Depression (APD) and Postpartum Depression (PPD) together are called perinatal depression. Various diagnostic criteria with major depression occur during pregnancy or within 4 weeks after delivery [13]. Based on previous research, women with a history of high levels of stress may be at increased risk for perinatal depression [14,15].

Based on the criteria of the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) [16] and the Edinburgh Postnatal Depression Scale (EPDS) [17], mothers with symptoms of postpartum depression are defined by several major symptoms, including a depressed mood or decreased pleasure. These symptoms include impaired appetite, physical agitation or psychomotor slowing, weakness, decreased concentration, and suicidal ideation. Mothers also often feel insomnia even though the baby has fallen asleep. These symptoms must be present throughout the day and last for at least two weeks [3,9].

Women who experienced depression during pregnancy had seven times the risk of developing postpartum depression than women who did not have symptoms of antenatal depression. An observational study of 78 depressed women in the first trimester of pregnancy found that postpartum depression did not occur in all women who received treatment, both psychotherapy and pharmacotherapy, compared with 92% of women who were depressed and did not receive treatment. Supportive and psychological interventions are more effective when performed after delivery than when they are initiated during pregnancy [18].

Mothers with postpartum depression need extensive treatment with both pharmacological and non-pharmacological therapies. Through non-pharmacological therapy, such as psychological therapy,

mothers can find the right way to deal with the symptoms of depression, deal with disorders that arise, or think positively when the situation is stressful [19,20].

There are several non-pharmacological techniques to relieve anxiety such as pregnancy exercise, distraction, biofed back, yoga, acupressure, aroma therapy, steam therapy and hypnosis. Hypnosis is a natural method used to relieve fear, panic, tension, and other pressures. Hypnosis is done by making direct contact with the subconscious, by giving suggestions in order to build various positive emotional conditions [21,22].

Khoirunnisa et al., [21] used a narrative review method to explore types of interventions for postpartum depression and found that several interventions such as music therapy [22], postpartum exercise [23], aerobic exercise [24], laughter therapy [25], cognitive behavior Therapy [26], Effleurage Massage Therapy [27], Acupressure Therapy [28], are effective in reducing postpartum depression.

Based on some of these studies provides an illustration that not many hypnotherapy interventions have been thoroughly scrutinized considering the impact of depression on postpartum mothers; we are therefore interested in analyzing the effectiveness of Audio Hypnotherapy in reducing postpartum depression, especially in the new normal period in 2021.

MATERIALS AND METHODS

Study design

This type of research is a quasi-experimental design using a pretest - posttest design.

Study Population

This research was conducted in January–December 2021 at the Teti Herawati Midwife clinic, Meli Rosita Palembang City and the Mariana Aceh Besar Indonesia, midwife clinic involving 60 participants who were randomly selected and had met the sample inclusion requirements such as

being healthy after giving birth, having never received hypnotherapy audio, mentally healthy, and has a cell phone. Demographic characteristics of postpartum women collected in this study were age, education, occupation and parity.

Sample size

The number of samples involved was 60 participants who were randomly selected from the population. Calculating the number of samples is determined using the Slovin formula [29], where from 71 people in the population, d = 0.05, the number of samples is 60.

Instruments

The incidence of postpartum depression will be measured using a standardized questionnaire developed by Cox et al., the Edinburgh Postnatal Depression Scale (EPDS). This questionnaire consists of 10 questions; each has four responses with a Likert scale from 0 – 3. The maximum value is 30, and the lowest is 0. It is called experiencing depression if the score is ≥ 10. EPDS has a sensitivity of 80% and a specificity of 84.4 % [23]. Meanwhile, EPDS in Indonesian has a sensitivity of 86% and a specificity of 78% [24]. The scale shows how the mother felt during the previous week. In doubtful cases it may be useful to repeat the tool after 2 weeks. This scale is not used to detect mothers with anxiety neuroses, phobias or personality disorders [25].

Interventions

Audio hypnotherapy is giving positive suggestions or orders to the subconscious mind to change thoughts, feelings, and behaviors for the better through MP3 voice recordings sent via WhatsApp groups. In this study, hypnotherapy was carried out by selfhypnosis using standardized hypnotherapy audio recording media. The selfhypnosis method with standard hypnotherapy audio recording media for 30 minutes in stages; pre-induction (introduction, explaining goals, and

building trust), filling in the informed consent sheet, explaining the use of tools, induction (the relaxation process brings the patient to the subconscious mind with Hanung techniques), deepening (trance), suggestion (giving messages with the aim of certain), and termination (slowly awakening the patient).

Before the intervention, all respondents filled out the EPDS questionnaire to determine the risk of postpartum depression. Then, respondents listened to Hypnotherapy audio for ± 30 minutes every night before going to bed for 2 weeks. After undergoing an audio Hypnotherapy intervention for 2 weeks, all respondents filled out the EPDS questionnaire to determine the risk of postpartum depression.

Ethical Consideration

Before the respondents filled out the questionnaire, the researchers first explained their informed consent about the scope of the research. Then after the prospective respondent agreed, the respondent signed an agreement to become a respondent. All data about respondents will be kept confidential and only used for research purposes. No economic incentives were offered or provided for participation in this study. The study protocol matched the Declaration of Helsinki ethical guidelines for clinical studies. This research has been approved by the Health Research Ethics Commission of the Health Polytechnic of the Palembang Ministry of Health with the number 1250/KEPK/Adm2/VIII/2021.

Statistical analysis

The statistical analysis was performed by SPSS software version 16. 0. Data are presented as number and percentage for categorical variables, and continuous data expressed as the mean ± standard deviation (SD) unless otherwise specified. The first statistical test, the McNemar test, aims to analyze differences in depression status before and after the intervention using categorical data.

Before conducting the different tests, first, we tested the normality of the data using the Kolmogorov Smirnov and found the data was not normally distributed. The research data were analyzed using the Wilcoxon test. This test was performed on same data sample in two different periods where the data were not normally distributed. It is considered significant if the research variable has a P-value <0.05.

RESULTS

The characteristics of respondents in this study include age, education, employment status and parity. The following is the frequency distribution of the respondents' characteristics in this study:

Characteristics	N	%
Age		
-]18-23]	10	16.7
-]24-30]	22	36.6
-]31-37]	12	20.0
-]38-44]	16	26.7
Education		
- Basic	2	3.3
- Junior school	10	16.7
- High school	28	46.7
- Associate degree	3	5.0
- Bachelor	7	11.7
Employment		
- Working	19	31.7
- Not working	41	68.3
Parity		
- Primipara	20	33.3
- Multipara	40	66.7

Table 1. *Frequency Distribution of Respondents Characteristics*

Table 1 shows that most of the mothers aged 24-30 years were 22 mothers (36.6%). The respondents' education is mostly High school as many as 28 respondents (46.7%). Most respondents did not work as many as 41 (68.3%), and multipara as many as 40 respondents (66.7%).

The results of statistical tests and the distribution of depression status before and after the

intervention are presented in table 2.

Depression Status	Pre	Post	P-value
Yes	26 (43.3%)	12 (20%)	0.0001
No	34 (56.7%)	48 (80%)	

Table 2. *Distribution of depression incidence before and after interventions*

Table 2 shows that before the intervention there were 26 depressed respondents then after the intervention there were 12 respondents. Based on the McNemar test, a p-value <0.05 was obtained, meaning that there were differences in depression status before and after the intervention.

Depression incidence	Kolmogorov smirnov	Sig.
Pretest-posttest	1.540	0.017*

*= significant test < 0.05**.**

Table 3. *Normality Test Results of depression incidence pretest and posttest audio hypnotherapy*

Table 3 shows that the results of the Kolmogorov Smirnov statistical test obtained a P-value <0.05, so the normality is rejected. The depression incidence data at the pre-post test audio hypnotherapy not normally distributed. Therefore, the statistical difference test was tested using Wilcoxon.

The results of the audio hypnotherapy pre-post test statistics and the mean depression incidence values are presented in table 4.

Table 4 shows that depression incidence before giving audio hypnotherapy has a mean value = 11.15, while after giving audio hypnotherapy, it decreases to 8.90, with P-value <0.05.

Depression incidence	Mean±SD	Median IQR (Q1-Q3)	P-value
Pretest	11.15±5.98	9 (6-14)	0.001
Posttest	8.90±4.79	8 (5.75-9)	

Table 4. *Average Depression Incidence Pretest and Posttest Audio Hipnoterapy*

DISCUSSION

Most pregnant women who face the birth process experience feelings of anxiety, even depression. Factors causing postpartum depression consist of biological factors, characteristics and background of the mother. Levels of the hormones estrogen (estradiol and estriol), progesterone, prolactin, cortisol which increase and decrease too quickly or too slowly are biological factors that cause postpartum depression [7]. The greater the decrease in estrogen and progesterone levels after childbirth, the greater the tendency for a woman to experience depression in the first 10 days after giving birth [8].

The estrogen and progesterone exert a suppressive effect on the activity of the monoamine oxidase enzyme. This enzyme can inactivate both noradrenaline and serotonin, which play a role in mood and depression. Estradiol and estriol are the active forms of estrogen formed by the placenta. Estradiol functions to strengthen the function of neurotransmitters by increasing the synthesis and reducing the breakdown of serotonin. Therefore, theoretically the decrease in estradiol levels due to childbirth plays a role in causing postpartum depression [9,10]. Biological causative factors are difficult and rarely measured in terms of maternal depressive symptoms [11]. Other factors that influence maternal depressive symptoms described in several studies include interpersonal variables (neural disorders, poor life experiences), social variables (marital dissatisfaction, lack of social support), and clinical variables related to pregnancy (risk in current pregnancy, problems with previous pregnancy) [12].

The results of the current study showed a decrease in the level of postpartum depression before and

after listening to audio hypnotherapy. This means that listening to audio hypnotherapy can reduce the level of postpartum depression, where postpartum mothers feel comfortable, calm and relaxed after listening to audio hypnotherapy, although not every night or every day. Audio hypnotherapy is a hypnosis therapy, where respondents get positive suggestions through MP3 audio sent via cellphone. Hypnotherapy or clinical hypnosis is an integrative mind-body technique using hypnotic suggestions for specific therapeutic purposes that are identified jointly by the hypnotherapist and client [26].

The results of the Paired Samples Test analysis showed a difference in the average level of depression before and after listening to audio hypnotherapy with a significance value of P-value 0.001. For this reason, it can be concluded that audio hypnotherapy can reduce the level of depression in pregnant women, especially during the Covid-19 pandemic. The average decrease in anxiety levels of pregnant women before and after listening to audio hypnotherapy is 2.6.

Hypnotherapy has long been believed to reduce postnatal pain by giving suggestions in the form of positive commands [27]. Through the process of hypnosis, the patient is brought into a relaxed state in order to calm the autonomic nervous system and induce positive emotions that affect the patient's coping mechanisms for pain perception [28]. It stimulates positive emotions for more norepinephrine production, reduces ROS production, increases tryptophan levels, and stimulates the ventricular nucleus which functions to secrete oxytocin in the dopamine system, and subsequently plays a role in pain modulation [6,29]. A deeper hypnotic state (trance) can help activate the endorphins and encephalin system that can inhibit the production of substance P, a pain sensitizing agent in the dorsal horn of the spinal cord [30]. Some respondents experienced persistent depression despite the intervention. This condition was caused by the respondent's disobedience in carrying out audio hypnotherapy. Most of the respondents underwent audio hypnotherapy at night before going to bed. Some respondents listen when they feel uncomfortable or when they have free time. Some respondents do not run audio hypnotherapy every night. In the future, audio hypnotherapy in order

to reduce the level of depression in postpartum mothers can be an important alternative therapy besides the provision of medical drugs.

CONCLUSION

Before the intervention, there were 26 depressed respondents. Then after the intervention, there were 12 respondents. Audio hypnotherapy has been proven effective in reducing depression in postpartum mothers.

LIMITATIONS

The assessment of the level of depression in the current study is still subjective. Future research can use more real/objective measurements or combine subjective and objective scales. Furthermore, the research location only involves 3 places, therefore it cannot compare the results of similar studies in different populations. The future research must be carried out involving several regions. This study also showed the possibility that socio-demographic factors' influence could not be controlled because the respondent's character was not matched.

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COMPETING INTERESTS STATEMENT

There are no competing interests for this study.

AUTHORS' CONTRIBUTION

All authors equally contributed to preparing this article.

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Cardiopulmonary Resuscitation (CPR) during COVID-19 Pandemic

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Commentary

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ABSTRACT

Introduction: The COVID-19 infection has a high rate of mortality and morbidity and is extremely contagious. COVID-19 has raised attention to safety issues involving healthcare workers who perform CPR. The risk of transmission produces a dilemma to perform cardiopulmonary resuscitation (CPR) within the COVID-19 pandemic. Additionally, patient and/or family preferences, as a factor associated with Do-Not-Resuscitate (DNR). This commentary wants to provide an overview or other perspectives that may be the subject of further research so that there will be evidence base practice for health workers, especially nurses in code blue situations.

Discussion: COVID-19 pandemic has clearly had a significant impact on the epidemiology and outcome of cardiac arrest in both out-of-hospital and in-hospital settings. All potential COVID-19 patients should be offered the advantage of CPR by attempting to revive them after taking all required safety precautions, and the patient should only be confirmed dead after CPR has been performed. Provision of further information regarding CPR to patients and/or families for consideration, including the advantages and disadvantages of CPR, before making a final decision regarding the administration of CPR. COVID-19 patients with a poor prognosis might benefit from Do-Not-Resuscitate (DNR) but this is causes dilemmas in nursing profession.

Conclusion: Although the survival rate for COVID-19 patients is poor, it is anticipated that CPR attempts will still be performed during the COVID-19 pandemic by following several guidelines. COVID-19 patients with a poor prognosis might benefit from Do-Not-Resuscitate (DNR) if the patient and/or family who are accountable provide their approval and everything is in order. As a nurse, we must respect the decisions that patients or families make because it is their right and their authority.

Keywords: CPR; Cardiac Arrest; DNR; COVID-19; Nursing

INTRODUCTION

The COVID-19 pandemic is extremely challenging health care systems worldwide and increasing principal ethical issues, especially concerning a prospect need for health care in the context of scarce resources and crisis capacity. Cardiac arrest is defined as the sudden cessation of cardiac mechanical activity, confirmed by the absence of signs of circulation. Lack of blood flow to the brain and other vital organs can cause loss of consciousness, powerlessness, or death if not treated properly [1]. Cardiac arrest is associated with pneumonia in COVID-19 patients, myocardial injury has a poor percentage of outcomes, whereas other Cardiovascular Disease (CVD) cases without myocardial injury are relatively vulnerable [1,2]. The COVID-19 patients may experience respiratory dysfunction and a subsequent change in tissue oxygenation that directly affects the cardiovascular system and results in serious issues including myocarditis, myocardial injuries, acute myocardial infarction, heart failure, cardiac dysrhythmia, and thromboembolism [3]. COVID-19 infection has a high mortality and morbidity rate and is highly contagious. COVID-19 has raised attention to safety issues involving healthcare workers attempting CPR. Among the several aerosol-producing procedures performed on patients, CPR is strongly associated with a variety of aerosol-generating procedures, including chest compression, positive pressure ventilation, and the respiratory tract maneuver. This will trigger extremely concerned about being infected with COVID-19 because considering that the COVID-19 virus is very dangerous for vulnerable populations.

Several inpatients experiencing cardiac arrest are administered cardiopulmonary resuscitation (CPR), provided advance instructions are available or the patient has a documented Do-Not-Resuscitate (DNR) status [4]. Despite the fact that attitudes regarding CPR have changed due to the COVID-19 pandemic, the majority of respondents reported that they would be prepared to do CPR if they encountered a cardiac arrest incident. Notably, independent of usual circumstances, people are more inclined to perform CPR without mouth-to-mouth resuscitation. There were other factors that affected CPR during the COVID-19 pandemic, however the two of that had been determined to be of

considerable increasing significance were the fear of contracting COVID-19 and the fear of spreading COVID-19 to others, which were assessed at 78% and 29%, respectively [5,6]. This is a separate consideration for health workers, especially nurses in implementing CPR in cases of cardiac arrest during the COVID-19 pandemic.

When a new pandemic begins, the infection in healthcare facilities spreads easily. In April 2020, as many as 22,073 cases of COVID-19 among healthcare professionals were reported to the WHO. On February 2020, there were 1716 healthcare professionals in China who had contracted SARS-CoV-2. As many as 3300 people were infected as of early March, and at least 22 of them died in China. As of March 2020, about 2600 people were infected in Italy, and 13 of them had died [7]. When performing CPR during the COVID-19 pandemic, there are several factors that need to be considered carefully to ensure the safety of the rescuers, the patients, and the surroundings. The purpose of writing comments on this article is to provide an opinion regarding the administration of CPR in cardiac arrest in patients with COVID-19 or during this COVID-19 pandemic.

The resuscitation guidelines, in force considering 2015, have consequently been adapted to this new situation, e.g., for Basic Life Support (BLS), mouth-to-mouth ventilation in addition to chest compression are encouraged to bystanders. For Advanced Life Support (ALS), bag-masks or Supraglottic Airway (SGA) ventilation are considered appropriate options to tracheal intubation [8]. Recently, updates have been issued, considerably with the aid of using the International Liaison Committee on Resuscitation (ILCOR), European Resuscitation Council (ERC), and the American Heart Association (AHA). Briefly, the principle modifications advise that lay rescuers have to consider chest compressions only, except for children, and all life support providers must use PPE all through resuscitation and favor early tracheal intubation to minimize aerosols.

The risk of transmission of the SARS-CoV-2 virus to initial responders performing cardiopulmonary resuscitation (CPR) produce a dilemmas to manage CPR within the COVID-19 pandemic. A better knowledge of this could enable identification of which individuals are less likely to benefit from CPR,

and inform discussion of a Do Not Resuscitate (DNR). This aims to provide an overview or other perspectives that may be the subject of further research so that there will be evidence base practice for health workers, especially nurses in code blue situations.

DISCUSSION

1. CPR and COVID-19 Additional Considerations

The new regulations for performing high-quality CPR during the COVID-19 pandemic have been introduced to lower the risk of COVID-19 transmission. In order, the American Heart Association (AHA), European Resuscitation Council (ERC), International Liaison Committee on Resuscitation (ILCOR), and other resuscitation associations have been released a modification guidelines or recommendations for the COVID-19 pandemic concerns into account [9-11]. Several modification and recommendation implemented since the COVID-19 pandemic:

1) International Liaison Committee on Resuscitation (ILCOR)

   Treatment recommendations from ILCOR for performing CPR to address cardiac arrest problems in patients with COVID-19 [12].

   a) Cardiopulmonary resuscitation and chest compressions may produce aerosol.
   b) Rescuers consider public-access defibrillation and compression-only.
   c) Rescuers who are committed, competent, and trained may choose to give children rescue breaths in addition to chest compressions (good practice statement).
   d) Should wear personal protection equipment during resuscitation
   e) Rescuers consider defibrillation before donning aerosol-generating personal protection equipment.

2) European Resuscitation Council (ERC)

The following new recommendation of Basic Life Support (BLS) are advised by the European Resuscitation Council for patients with confirmed or suspected COVID-19 [12,13].

a) Should have prior training in appropriate use of PPE
b) Consider to compression-only CPR if bag-mask ventilation is difficult or not available
c) Use a high-efficiency particulate air (HEPA) filter during bag-mask ventilation
d) Use two hands to hold the mask and the person doing compressions can squeeze the bag when they pause after 30 compressions
e) Use PPE (surgical mask, eye protection, apron, and gloves) before defibrillation because not an aerosol-generating procedure

3) American Heart Association (AHA)

The American Heart Association (AHA) introduced new recommendation for Basic Life Support (BLS) in COVID-19 patients both in-and out-of-hospital cardiac arrest [13].

a) Significantly reduce the risk of infection with vaccination and boosters.
b) CPR is considered to be an aerosol-generating procedure (AGP) such as hest compressions, defibrillation, bag-valve-mask (BVM) ventilation, intubation, and positive pressure ventilation.
c) Should wear PPE such as N95 mask, gloves, gown, eye protection, positive pressure ventilation.
d) PPE must be donned before performing components of resuscitation.

If patients have any signs and symptoms, bystanders should give defibrillation only and without chest compression unless they have PPE. As a result, the estimated death rates for CPR are extremely low, and the use of barriers such as PPE was strongly recommended to reduce the risk of COVID-19 transmission. Cardiopulmonary Resuscitation (CPR) attempts such as chest compression only and defibrillation only as procedures with an increased risk

of COVID-19 transmission. Tracheal intubation and mouth-to-mouth or mouth-to-mask ventilation were associated with a high risk of COVID-19 transmission. Although previous research has shown that compression-only CPR is as effective as combined compressions and ventilations, this could not be the case for COVID-19 patients because they suffer from primary respiratory failure.

The European Resuscitation Council (ERC) COVID-19 guidelines encourage continuing resuscitation efforts for cardiac arrests that occur both inside and outside of hospitals while also attempting to reduce risk to the person providing treatment. The COVID-19 guidelines focus specifically on patients with COVID-19. Those providing treatment should conduct a dynamic risk assessment, which may include current COVID-19 prevalence, the patient's presentation, the probability that treatment will be effective and efficient, the accessibility of personal protective equipment (PPE), and personal risks for those providing treatment [14]. The proportion of patients with shockable rhythms decreased, as did the use of automated external defibrillators. The use of supraglottic airways increased, while the rate of intubation decreased. Overall, there was a increase rates return of spontaneous circulation, survival to admission, and survival to discharge.

2. CPR Outcomes during COVID-19 Pandemic

According to recent research, in-hospital cardiac arrest (IHCA) among COVID-19 patients was 9.39%, with 9% ROSC and 2% survival to hospital discharge. Accordingly, the average rate of out-of-hospital cardiac arrest (OHCA) survival to discharge is 8.8% [15]. But among COVID-19 patients, two more investigations on both in- and out-of-hospital CA showed a 0% survival rate to hospital discharge rate [16,17]. The primary CPR success rate among COVID-19 patients was low, especially for those with asystole or bradycardia [3,18]. This harmful infection has influenced the CPR efficacy because there are additional considerations

for the CPR attempt. Therefore, the COVID-19 pandemic has largely influenced CPR procedures. Apart from the various factors involved in performing CPR, another thing that must be considered is the ability and capability to perform CPR through training [19]. Participation in training such as Basic Trauma Cardiac Life Support (BTCLS) or Advanced Cardiac Life Support (ACLS) will help nurses gain more knowledge, experience, and skills when it comes to performing CPR on cardiac arrest patients.

Continuous cardiopulmonary resuscitation (CPR) training and quality control systems, such as monitoring morbidity and mortality, are also recommended [20]. Every nurse, especially those working in emergency room, needs to have the necessary training to administer first aid in accordance with protocol. As a result, nurses may feel more confident and competent to provide CPR in situations of cardiac arrest.

Data from in-hospital cardiac arrests caused by COVID-19 are less commonly reported. According to a multicenter cohort study from 68 Intensive Care Units in the United States found that 14.0% (701/5019) of patients had an in-hospital cardiac arrest, 57.1% (400/701) received CPR, and 7.0% (28/400) survived to hospital discharge with normal or mildly impaired neurological status [21]. According to data from 136 patients in China, about 113 (83.1%) of them required CPR, and ROSC occurred in 18 (13.2%) of the patients, 4 (2.9%) survived for at least 30 days, and one patient had a favorable neurological outcome at 30 days [22]. COVID-19 pandemic has clearly had a significant impact on the epidemiology and outcome of cardiac arrest in both out-of-hospital and in-hospital settings.

3. Nursing Decision-Making

Nursing is patient-centered care. A nursing profession requires to follow an ethical code, which allowed to provide great nursing care. Therefore, the nursing profession intends to maintain and improve health care in society. The key point is that a lower survival rate in CPR

was reported at the start of the COVID-19 pandemic compared to previous years. All intervention decisions must involve informed and involved patients and/or families, according to national and institutional policy [23]. However, patient and/or family preferences, as a factor associated with Do-Not-Resuscitate (DNR). Provision of further information regarding CPR to patients and/or families for consideration, including the advantages and disadvantages of CPR, before making a final decision regarding the administration of CPR.

It is critical for determine personal goals and preferences regarding a resuscitation attempt. The mortality rate for COVID-19 patients who seemed to be critically ill was significant and increased with age, comorbidities, and symptom severity. The AHA recommends taking these considerations into account when weighing the risk versus the benefit of initiating resuscitation. Furthermore, many different institutions have strongly advised patients with poor prognoses to consider DNR. When considering DNR, COVID-19 positivity by itself cannot be a factor except when it is accompanied by irreversible multi-organ dysfunction [16,24]. All potential COVID-19 patients should be offered the advantage of CPR by attempting to revive them after taking all required safety precautions, and the patient should only be confirmed dead after CPR has been performed. The statement emphasized the need for all professionals to consider every cardiac arrest victim who presents to the emergency room as a possible COVID-19 suspect during the pandemic and to wear the proper PPE. The CPR method should be performed with the fewest number of essential medical professionals present, ideally in a single-person room with the door closed.

It is noteworthy that CPR, in some cases, has been initiated by nurses, but the decision-making process for non-resuscitation is made by the physician and based on the discussion between the all-team members, considers not being useful the CPR maneuvers for some cases. It depends on the nurse, among other actions, the functionality of the stop cart, with availability of materials necessary for this type of assistance, technical procedures for venipuncture,

preparation and administration of medications, supervision of the technical professionals of the nursing team and possible relay in resuscitation maneuvers.

4. Ethical Approaches and DNR

The reality requires reflection with a professional ethical focus on the duty of updating professionals, as provided for in the Code of Ethics for Nursing Professionals, and which determines that the patient has the right to get preserve of correct information, to be heard in their needs, and to get preserve of resolute humanized care. These conclusions are based on bioethical reflection and acknowledgement that not all nurses working in palliative care for COVID-19 patients with DNR are able to provide communication that supports this choice, either by acting in accordance with protocol or by providing nursing care without considering or updating the practice of euthanasia. In this situation, struggling to take into consideration the knowledge of those involved or neglecting to listen to the patient and family interferes with their ability to communicate effectively and their autonomy, leading to conflicts and challenges in the management of nursing care.

According to qualitative research, in Maryland there are 31 nurses who worked for COVID-19 patients in the acute care units, in depth-interview the nurse mentioned that “They really push that DNR and that’s like a part of my distress, because I know I’m very patient-family centered in my thinking…because it’s futile they tell the family this person should be DNR. They’re over 70, we’re not going to escalate care…The family has to believe whatever we tell them…so hopefully they’re right, because they don’t have a choice, the family or the patient.[25]” Knowing the DNR order causes the nurse to experience moral distress. Rather than enhancing services, prepare for end-of-life care is something that is very difficult. Of course, as a nurse, you want to do the best for patients and their families, but not in the event of a DNR, because It is the patient and family's authority. Besides, disagreement about the

proper use of end-of-life care is one of the triggers of moral distress when providers encourage families to do DNR.

According to qualitative research, in Philippines there are 12 nurses who worked in COVID-19 ward of several hospitals, the nurse mentioned that “Occasionally, family members decide against intubation because they do not wish to witness their family member suffer further and add to the agony of the patient [26].” Severe symptoms of COVID-19 prompt families to put their loved ones out of the misery and sign DNR forms. In this case, nurses support symptom-free death and suffering reduction through assisting patients and families.

According to qualitative research, in United States there are 7 ICU nurses, in interview session the nurse mentioned that "Patient was a DNR or DNI maxed out on BiPAP (bilevel positive airway pressure support) and developed respiratory arrest. I, the nurse, and the intensivist thoroughly explained the situation to the family and encouraged transition to comfort care, yet the family refused. The patient suffered for another day and a half before she died. I was furious at the family and heartbroken for the patient, she deserved a more dignified death than she received [27].” The nurse was not explicit use term “moral distress” but describe about condition when they experienced moral-constraint distress because they perceived the life-sustaining treatments provided were contrary to the patient’s wishes and contributing to the patient’s suffering because they were constrained by a DNR order. Surrogate decision-making are not reflect the fully patient’s wishes.

Evidence has emerged illustrating ethical dilemmas in conducting DNR discussions during the COVID-19 pandemic [28]. Based on some of the qualitative research findings in several countries, it shows that DNR status causes moral distress due to opposition, and disagreement about DNR. Moreover, nurses have to support symptom-free death and suffering reduction for patients and their families. Additionally, nurses believe that the DNR is not in line with the patient's intentions and that the surrogate decision-making certainly does

not properly represent the patient's preferences. Some of the responses given by nurses depend on the assessment of the ethics held. This can be considered valid or correct if it is based on strong evidence.

CONCLUSIONS

Even when cardiopulmonary resuscitation is administered, cardiac arrest is common in critically ill COVID-19 patients and is associated with poor survival. COVID-19 patients with a poor prognosis might benefit from Do-Not-Resuscitate (DNR) if the patient and/or family who are accountable provide their approval and everything is in order. In fact, CPR efforts are still possible if there is a chance of surviving the patient. Although the survival rate for COVID-19 patients is poor, it is anticipated that CPR attempts will still be performed during the COVID-19 pandemic by following several guidelines in order to help people COVID-19 patients to survive using the American Heart Association (AHA), European Resuscitation Council (ERC), International Liaison Committee on Resuscitation (ILCOR), and other resuscitation associations modification guidelines or recommendations for the COVID-19 pandemic. However, patient and/or family preferences, as a factor associated with Do-Not-Resuscitate (DNR) in several cardiac arrest conditions. Nursing profession have to reflection and uphold ethical as provided for in the Code of Ethics for Nursing Professionals. DNR status causes moral distress due to opposition, and disagreement. Surrogate decision-making certainly does not properly represent the patient's preferences. As nurse, we have to support symptom-free death and suffering reduction for patients and their families, and respect the decisions that patients or families make because it is their right and their authority.

CONFLICT OF INTERESTS DISCLOSURE

The author declares that there is no conflict of interests

ETHICAL APPROVAL

Not applicable

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