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Impact of COVID-19 Pandemic on Nutrition Services in Banyumas, Central Java

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ABSTRACT
The current COVID-19 pandemic and social restriction led to disruptions to Indonesia's public health services. This research assessed the pandemic impact on nutrition services in Banyumas regency. Utilizing monthly registers from 40 subdistrict health services and interviews with public health officers, this research is a mixed-method study. Paired sample t-test was performed to compare the changes before and during the pandemic. Reduced community-based growth monitoring activities (p = 0,001), and early initiation of breastfeeding (p = 0,03) were two nutrition challenges identified in Banyumas. A slight reduction in postpartum vitamin A supplementation, antenatal care 1 and 4 services were also observed but statistically non-significant. Knowing that good nutrition strengthens the immunity and overall health of mothers, babies, and families. Improving nutrition services as part of the public health system and adaptive public policy is key to building resilience to future pandemics.

Keywords: Nutrition Services, COVID-19 Pandemic, Public Health Services

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BACKGROUND

On March 2nd, 2020, precisely 62 days after the Chinese government informed the World Health Organization (WHO) about the pneumonia outbreak in Wuhan, the capital of Hubei (Zhu et al., 2020), acute respiratory syndrome coronavirus 2 (SARS-CoV-2) confirmed as the first case in Indonesia, and since then the virus that caused the 2019 coronavirus (COVID-19) has continued to spread throughout the country (Djalante et al., 2020). On November 11th, 2020, the pandemic reached 1.183.555 confirmed cases, and 32.381 deaths were reported (Kemenkes RI, 2021).

In May - July 2020, WHO conducted a survey in 105 countries regarding the impact of COVID-19 on the most affected essential health services. The results showed that 70% of complete immunization services experienced problems, and so did the management of malnutrition services experienced problems by 51%. Nearly 90% of countries experience the impact of disruption to health services, and this is more frequent, especially in low and middle-income countries (WHO, 2020b). The same problem found by Kemenkes RI and UNICEF in the Report of Rapid Health Assessment stated that nearly 76% of Primary Health Service (Puskesmas) eliminated Village Health Posts (Posyandu), and more than 41% home visits have been suspended. Furthermore, Puskesmas experienced a limited disruption with less than 7% closure (Kemenkes RI; UNICEF, 2020).

These findings indicate that the COVID-19 pandemic has damaged public health services, particularly in nutrition services. The health impact of adolescents in India during the COVID-19 pandemic was the emergence of nutritional problems due to the cessation of routine iron supplementation because the learning process transferred to the home (Kumar, Priya, Panigrahi, Raj, & Pathak, 2020). Other studies found a decrease in complete basic immunization coverage and the weighing of children under five during the Ebola pandemic in Sierra Leone (Elston et al., 2015). A decline in antenatal visits and deliveries by health workers by 50% and 32% observed during the Ebola outbreak in Liberia (Shannon et al., 2017), and this trend did not improve even after the outbreak ended (Delamou et al., 2017).

At an early stage of the COVID-19 pandemic in Indonesia, the national government issued a social distancing strategy. This policy aims to limit people's frequent interaction in a crowd, keeping space of physical contact between people to minimize the virus's spread (Herdiana, 2020). Afterward, the government set up a Public Health Emergency Status through Presidential Decree number 11 of 2020 and Government Regulation number 21/2020 concerning Large-Scale Social Restrictions or *Pembatasan Sosial Berskala Besar* (PSBB). As referred to the newest regulation, the restriction is carried out by considering fulfilling the population's basic needs and health care. Those mentioned regulations become the basis for making decisions regarding the emergency response status for COVID-19 in Banyumas district.

This study aimed to determine the impact of COVID-19 pandemic on nutrition services, data analysis was conducted in Banyumas district.

METHODS

This research is a mixed quantitative and qualitative method study. The sample size calculation based on a purposive sampling of the nutrition services. Data was acquired using monthly register program data from 40 Primary Health Service in Banyumas district for two particular duration: before pandemic (March 2019 - December 2019) and during pandemic (March 2020 - December 2020) from December 2020 to February 2021, along with COVID-19 supporting data: confirmed cases, government regulations, and public policy. Interviews were also conducted in this study with the health officer.

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We compare the national and Banyumas trend of number of cases between March to December 2020 to identify the progress of the number of COVID-19 cases. The total number of confirmed national COVID-19 cases was obtained from publicly available COVID-19 National Tasks Force and COVID-19 Banyumas Tasks Force as sources of the total of confirmed local cases. Nutrition services in this research were grouped into two main categories: (a) public nutrition services; and (b) immunization for children and pregnant women.

The tabulations were conducted in Microsoft Excel 365 then narrated descriptively. Paired sample t-test was performed to compare the mean difference of health services in monthly between 20 month periods considered pre- and during-COVID-19 pandemic. All statistical analyses were performed using SPSS 21.0.

RESULTS

This study found evidence that rising COVID-19 cases affected the implementation of Posyandu, breastfeeding practices, and other utilization of services in health facilities. The findings are described below.

The trend of increasing COVID-19 cases at national level and Banyumas between March to December 2020

The first 2 cases in Indonesia were found in Depok City, West Java, on March 2nd 2020. In Banyumas, Central Java, the first case was found on March 21st, 2020. The graph (Fig.1) indicates the same trend of raising COVID-19 cases nationally and locally. Due to the pandemic situation, various public policies about emergency response were implemented to undertake this condition. The first Banyumas regent decision was about the emergency response status of COVID-19 enforced since March 20th, 2020, and extended to its third regent decision until September 30th, 2020. These include wearing a mask in public, attempting social distancing, postponing an event or mass gathering activities, including Posyandu as one of the nutrition services in Puskesmas.

It can be stated that implementing policies at the beginning of the pandemic, even before cases founded in Banyumas, impacts suppressing virus transmission. But once the emergency response status was lifted at the end of September 2020, confirmed cases rose rapidly until the end of the year.

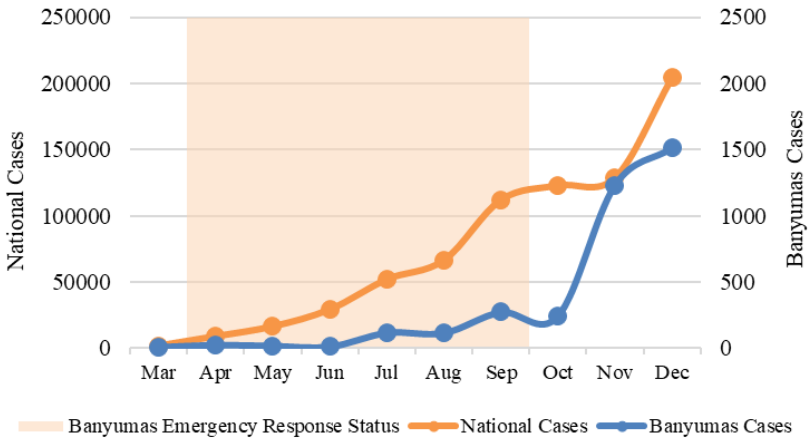

Figure 1. Monthly confirmed COVID-19 cases in Indonesia and Banyumas from March to December 2020.

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The effect of COVID-19 on nutrition services coverage

Community participation in growth monitoring is measured using the D/S indicator, the ratio of all children under five was monitored among all children under five. In the second trimester of 2020, monitoring activities were eliminated due to COVID-19 Emergency Response Status since March 30th, 2020. In October and December 2020, Posyandu activities were canceled due to the drastic increase in confirmed cases of COVID-19 (Fig. 2). Throughout the pandemic period (March – December 2020), the monitoring was only carried out five times with an average participation of 77% (95% CI: 73.8 - 81.6), with p = 0.03, compared to before the pandemic, the average D/S participation reached 82.7% (95% CI: 81.1 - 84.3). It indicate a statistically significant effect on the D/S indicator before and during the COVID-19 pandemic.

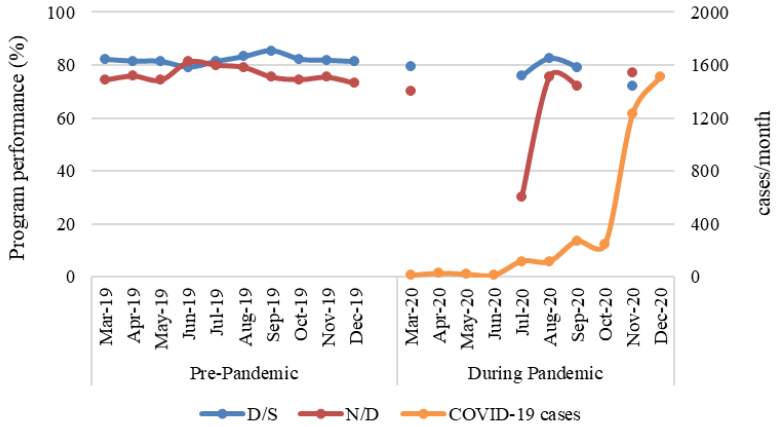

Figure 2. Community participant (D/S) rate in and weight gain rate in monitored children (N/D) in Posyandu before and during COVID-19 Pandemic, Banyumas, 2019-2020.

A similar trend were observed for the N/D indicator, the ratio of weight gain (N) in under-fives monitored (D). The pre-pandemic N/D mean was 76.9% (95% CI: 74.4 - 79.4) compared to 64.9% (95% CI: 45.2 - 84.6) during the pandemic, with *p* = 0.28. In July 2020, N/D reached the lowest percentage in 2020 with only 30% coverage (Fig 2).

Table 1. Banyumas Nutrition Service Coverage March-December 2019 and March-December 2020

Nutrition Services	March – December 2019: mean month (95% CI)	March – December 2020: mean month (95% CI)	*p-value*
D/S coverage (%)	82.7% (81.1 – 84.3)	77.7% (73.8 – 81.6)*	0.03
N/D rate (%)	76.9% (74.4 – 79.4)	64.9% (45.2 – 84.6)*	0.28
Early Initiation of Breastfeeding (%)	74.5% (71.6 – 77.4)	43.4% (30.9 – 55.9)	0.001

*Obtained from five months when the growth monitoring services were held.

Vitamin A supplementation services remain stable in during-pandemic period. In August 2019, vitamin A supplementation coverage in infants (6 - 11 months) and children (12 - 59 months) was 99.8% and 99.6%. In August 2020, vitamin A coverage in the same group reached 99.9% and 99.9%. Health workers confirmed the optimal implementation of Vitamin A service due to the routine nutrition program simultaneously and cadres' active participation.

"*August is the routine growth monitoring month along with the Vitamin A supplementation and PMT (community-based supplementary feeding)", "Distribution of Vitamin A remains high due to door-to-door sweeping for toddlers who do not attend Posyandu by cadres*" (Banyumas Health Service Officer).

Early breastfeeding initiation (IMD) services experienced the most significant reduction from 74.5% (95% CI: 71.6 - 77.4) in the period before the pandemic to 43.4%

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(95% CI: 30.9 - 55.9) during the pandemic, with $p = 0.001$. IMD coverage began to decline by 28.2% from March to April 2020 and decreased by 15% in May 2020. Within two months at the beginning of the pandemic, the most significant IMD coverage decrease was approximately 43.2%. This trend did not quickly improve and continued to fluctuate until the end of the year, with the lowest coverage in May and July that reached 29.6% (Fig 3).

"*IMD has indeed decreased since there was information from the Provincial Health Office of Central Java to eliminate IMD during the pandemic, they feared IMD could cause the COVID-19 transmission since the trend indicates numerous suspected cases", "It was a decision at a midwifery meeting*," (Banyumas Health Service Officer).

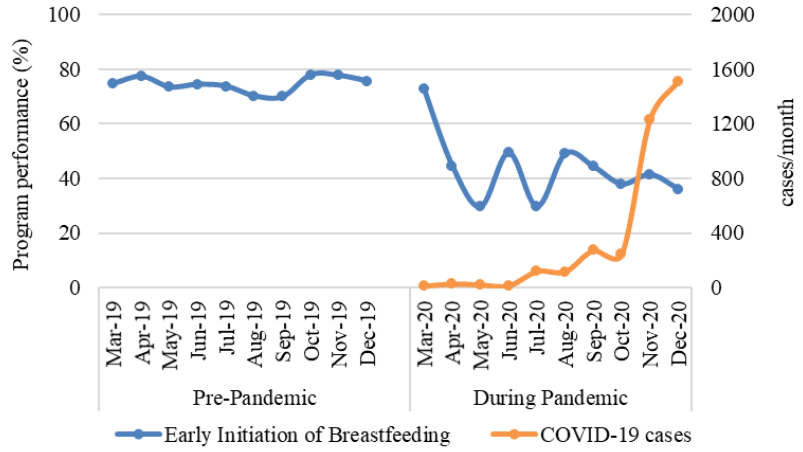

Figure 3. Early initiation of breastfeeding before and during COVID-19 Pandemic, Banyumas, 2019-2020.

90 iron-folic acid (IFA) tablets distribution to pregnant women frequently fluctuated since the pre-pandemic period due to the change in the number of pregnant women every month. In the pre-pandemic period, the IFA distribution coverage reached 89.4% of 24,666 targets or 2,205 pregnant women each month. During the pandemic, IFA distribution was carried out through antenatal care services and reached 89.5% of 24,184 targeted group, or 2,165 pregnant women each month (Fig. 4).

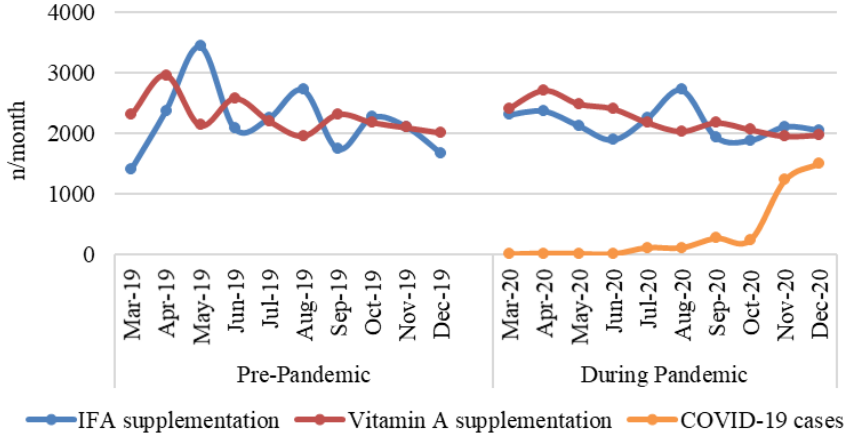

Figure 4. Trends in iron-folic acid distribution in pregnant women, and vitamin A supplementation in postpartum women before and during COVID-19 Pandemic, Banyumas, 2019 – 2020.

The distribution of vitamin A for postpartum women during the pandemic appears to have decreased until the end of the year (Fig 4). 94.1% of 23,158 targeted postpartum women have received two doses of vitamin A supplementation, or the average recipient every month is 2,159 postpartum women.

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Emergency response affects the utilization of immunization services

Complete basic immunization service began to be affected by the pandemic in April 2020 and dropped by 72.2% from March due to activity restrictions based on local regulations. With activities adaption, toddlers who have not been vaccinated in April can get services in May 2020. This service recovered from May to September 2020 but started showing a decrease until November 2020. The same trend occurs in the tetanus toxoid vaccine service for pregnant women, where coverage fell by 36% from March to April 2020 due to activities restriction (Fig. 5)

"*Vaccination activities are interrupted because there are restrictions*", "*For those who have not received the vaccine during restrictions period, the services are available in May 2020*" (Banyumas Health Service Officer)

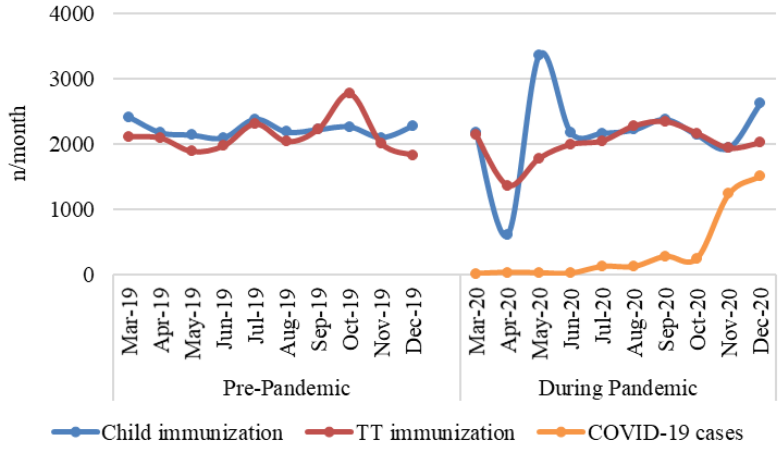

Figure 5. Trends in utilizing immunization services for child and pregnant women before and during COVID-19 pandemic, Banyumas, 2019-2020.

DISCUSSION

According to the researchers, this is the first study to assess the impact of the COVID-19 pandemic on nutrition program services from the Banyumas Regency area's perspective. There are several key findings to be concerned, i.e., challenges in community-based growth monitoring and early initiation of breastfeeding services. This study found a slight decline in other nutrition and immunization services, but statistically non significant. Hence, potential health consequences emerged, mainly related to children's health.

Statistically (Table 1), the COVID-19 pandemic affects community participation (D/S) but has no effect on weight gain for under-five who are monitored (N/D) in Posyandu services. According to the General Guidelines for Posyandu Management, it is a program that should be held regularly every month (Kemenkes RI, 2011). In practice, Posyandu cannot be held every month in Banyumas Regency during the pandemic. According to the Minister of Home Affairs, the operation of Posyandu during pandemic can be implemented with requirements to apply the principles of infection prevention and physical distancing (Menteri Dalam Negeri, 2020) if the area does not have a PSBB policy or there are no COVID-19 cases (Kemenkes RI, 2020). Due to the COVID-19 Emergency Response Status in Banyumas, gather mass activities, including growth monitoring at Posyandu are postponed (Bupati Banyumas, 2020a, 2020b, 2020c, 2020d, 2020e). The findings in Banyumas are in line with a rapid survey conducted by the Indonesian Ministry of Health and UNICEF, which found that at least 86% of Posyandu reported delays in monitoring children's growth and development (Kemenkes RI; UNICEF, 2020).

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The goal of growth monitoring is to identify children with various causes of abnormal growth so that they can be treated immediately (Haymond et al., 2013). Weight/height and height/age references are used to determine stunted, wasted, and overweight children so that it is possible to provide the proper intervention (WHO, 2009, 2013). The systematic collection of height measurements is needed for assessing body mass index (ratio of weight in kilograms to height in meters squared), an indicator for monitoring public health problems of childhood overweight and obesity (Lobstein, Baur, & Uauy, 2004). Posyandu becomes essential in nutrition service since Banyumas Regency has been designated as a pilot area for handling stunting with high malnutrition cases (Gubernur Jawa Tengah, 2019).

IMD services in Banyumas were negatively influenced during the COVID-19 pandemic. According to the Guidelines for Toddler Health Services during the COVID-19 Pandemic, efforts can be made to continue IMD by preventing infection transmission and consulting with health workers. However, babies born from suspected/confirmed mothers are not subjected to IMD (Kemenkes RI, 2020). The Health and Nutrition Section of the Banyumas District Health Office confirmed this act. The '*No touch*' policy, identified to be the main reason that weakened infant and young children feeding in Sierra Leone during the Ebola outbreak because their feeding habits changed, as a strong warning to not to touch the children if the mothers felt sick, and if one is an EVD survivor they should not breastfeed their babies at all (Kodish, Bio, et al., 2019; Kodish, Simen-Kapeu, et al., 2019)

On the other hand, a lesson learned from the HIV pandemic is to continue breastfeeding to maximize babies' health. Any policies related to COVID-19 should support the existence of skin-to-skin contact of mother and child for breastfeeding (Gribble, Mathisen, Ververs, & Coutsoudis, 2020). The SASR-CoV-2 is transmitted through respiratory droplets and intimate contact routes. In the study of 19 newborns whose mothers tested positive for COVID-19, no SASR-CoV-2 was found in breast milk or amniotic fluid (Liu et al., 2020). Viral RNA particles were found in breast milk in a small case, but no live virus was found, and breast milk was not considered a transmission route (Costa et al., 2020). Another study found the presence of SARS-CoV-2 RNA in breast milk, this does not represent a replicable virus, and breast milk may not be a source of infection for the baby (Chambers et al., 2020; Groß et al., 2020). The clinical management of COVID-19, including newborns' care recommends that health facilities providing delivery services should allow mothers to breastfeed their babies as often and for as long as desired and health nurses' assistance during breastfeeding practices. All mothers should receive support for IMD and to manage difficulties related to breastfeeding practice. This support should be provided by a trained nurse or breastfeeding counselor (WHO, 2020a). The fear of transmission of the virus from a mother with suspected/confirmed COVID-19 to newborns needs to be studied further.

Vitamin A supplementation can be implemented optimally amid the pandemic due to the active participation of Posyandu cadres to ensure that each target group gets vitamin A at the right time. This services also documented in Depok, the delivering vitamin A program has succeeded in helping carry out the children weighing acitivies and providing vitamin A at the posyandu safely (Bustamam & Wahyuningsih, 2021). A different findings in Pekanbaru observed a reduction in vitamin A supplementation due to PSBB regulations, the fear of the cadres and the community itself (Maulida & Setiarini, 2021). The IFA supplementation is still given as before the pandemic through visits of pregnant women during antenatal care. A quasi-experiment in quantitative study to 38 pregnant women found

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that cadres has positively impact on giving information and motivation to take IFA supplementation (Rosiana & Sundari, 2021).

Vitamin A supplementation for postpartum women reported to experienced reduction during the COVID-19 period, but we couldn't explain this trend due to the limitation of available data i.e., postnatal care visits to report home deliveries, or any addaptation services during this pandemic that has not been documented well. A steep reduction was noted in both child immunization and tetanus toxoid immunization at the first month after first COVID-19 cases was found and the emergency response was implemented. A different findings in Sierra Leone, parents stopped having their children immunized for fear of the needles would injecting Ebola virus (Elston et al., 2015).

CONCLUSION

This research explains the impact of the COVID-19 pandemic on the decline in nutrition services. The monthly growth monitoring through Posyandu was only implemented five times during the pandemic period and IMD services for newborns was also reduced with average coverage during-pandemic period only reach 43.4%. An integrated policy is needed to overcome this trend given public health urgency, especially child health services. Maintaining Posyandu activities during pandemic to monitor children's growth and strengthening IMD services will support babies' safety by tightening health protocols. While the government currently focuses on overcoming COVID-19 and vaccination, a multi-sector nutrition program must be maintained to protect children as a vulnerable group against malnutrition, not only to prevent stunting but because good nutrition has a role in increasing immunity and therefore enhance the recovery.

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CONFLICTS OF INTEREST

Researches declares there is no conflict of interest.

REFERENCES

Bupati Banyumas. (2020a). *Keputusan Bupati Banyumas tentang Penetapan Status Tanggap Darurat Bencana Covid Nomor 840/1389/2020*. Banyumas.

Bupati Banyumas. (2020b). *Keputusan Bupati Banyumas tentang Perpanjangan Kedua Status Tanggap Darurat Bencana Covid Nomor 360/631/2020*. Banyumas.

Bupati Banyumas. (2020c). *Keputusan Bupati Banyumas tentang Perpanjangan Keempat Status Tanggap Darurat Bencana Covid Nomor 340/760/2020*. Banyumas.

Bupati Banyumas. (2020d). *Keputusan Bupati Banyumas tentang Perpanjangan Ketiga Status Tanggap Darurat Bencana Covid Nomor 340/714/2020*. Banyumas.

Bupati Banyumas. (2020e). *Keputusan Bupati Banyumas tentang Perpanjangan Status Tanggap Darurat Bencana Covid Nomor 360/568/2020*. Banyumas.

Bustamam, N., & Wahyuningsih, S. (2021). BULAN PENIMBANGAN BALITA DAN PEMBERIAN VITAMIN A DI POSYANDU LIMO DEPOK PADA PANDEMI COVID-19. *BERNAS: Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 152–157. Retrieved from https://www.ejournal.unma.ac.id/index.php/bernas/article/view/665

Chambers, C., Krogstad, P., Bertrand, K., Contreras, D., Tobin, N. H., Bode, L., & Aldrovandi, G. (2020). Evaluation for SARS-CoV-2 in breast milk from 18 infected

DOI: 10.30994/sjik.v10i1.686
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women. *Jama*, *324*(13), 1347–1348. Retrieved from https://jamanetwork.com/journals/jama/article-abstract/2769825

Costa, S., Posteraro, B., Marchetti, S., Tamburrini, E., Carducci, B., Lanzone, A., … Vento, G. (2020). Excretion of SARS-CoV-2 in human breast milk. *Clinical Microbiology and Infection*, *26*(10), 1430–1432. Retrieved from https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(20)30304-9/fulltext

Delamou, A., El Ayadi, A. M., Sidibe, S., Delvaux, T., Camara, B. S., Sandouno, S. D., … Zhang, W.-H. (2017). Effect of Ebola virus disease on maternal and child health services in Guinea: a retrospective observational cohort study. *The Lancet Global Health*, *5*(4), e448–e457. Retrieved from https://www.sciencedirect.com/science/article/pii/S2214109X17300785

Djalante, R., Lassa, J., Setiamarga, D., Mahfud, C., Sudjatma, A., Indrawan, M., … Djalante, S. (2020). Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. *Progress in Disaster Science*, 100091. Retrieved from https://www.sciencedirect.com/science/article/pii/S2590061720300284

Elston, J. W. T., Moosa, A. J., Moses, F., Walker, G., Dotta, N., Waldman, R. J., & Wright, J. (2015). Impact of the Ebola outbreak on health systems and population health in Sierra Leone. *Journal of Public Health*, *38*(4), fdv158. https://doi.org/10.1093/pubmed/fdv158

Gribble, K., Mathisen, R., Ververs, M., & Coutsoudis, A. (2020). Mistakes from the HIV pandemic should inform the COVID-19 response for maternal and newborn care. *International Breastfeeding Journal*, *15*(1), 1–5. Retrieved from https://link.springer.com/article/10.1186/s13006-020-00306-8

Groß, R., Conzelmann, C., Müller, J. A., Stenger, S., Steinhart, K., Kirchhoff, F., & Münch, J. (2020). Detection of SARS-CoV-2 in human breastmilk. *The Lancet*, *395*(10239), 1757–1758. Retrieved from https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31181-8/fulltext?fbclid=IwAR0Vby_rQ6RUKBnayHutG3bhHpkXsRGvi_zc8mj46xTCBkEkkRTAtgzT6NU

Gubernur Jawa Tengah. (2019). *Peraturan Gubernur Jawa Tengah No. 61/2019 tentang Rencana Aksi Daerah Pangan dan Gizi Provinsi Jawa Tengah Tahun 2019-2023*. Retrieved from https://jdih.jatengprov.go.id/downloads/produk_hukum/pergub/pergub_tahun_2019/pergub_61_th_2019.pdf

Haymond, M., Kappelgaard, A. M., Czernichow, P., Biller, B. M., Takano, K., & Kiess, W. (2013, August). Early recognition of growth abnormalities permitting early intervention. *Acta Paediatrica, International Journal of Paediatrics*, Vol. 102, pp. 787–796. https://doi.org/10.1111/apa.12266

Herdiana, D. (2020). SOCIAL DISTANCING: INDONESIAN POLICY REPONSE TO THE CORONA VIRUS DISEASE 2019 (COVID-19). *Jurnal Ilmu Administrasi: Media Pengembangan Ilmu Dan Praktek Administrasi*, *17*(1), 93–110. Retrieved from http://180.250.247.102/index.php/jia/article/view/555

Kemenkes RI; UNICEF. (2020). *Report of Rapid Health Assessment*. Retrieved from https://www.unicef.org/indonesia/reports/report-rapid-health-assessment

Kemenkes RI. (2011). *Pedoman Umum Pengelolaan Posyandu*. Jakarta.

Kemenkes RI. (2020). *Panduan Pelayanan Kesehatan Balita Pada Masa Pandemi COVI-19 Bagi Tenaga Kesehatan* (Revisi I). Retrieved from

DOI: 10.30994/sjik.v10i1.686
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 1369-1379

https://infeksiemerging.kemkes.go.id/download/Panduan_Pelayanan_Kesehatan_Balita_pada_Masa_Pandemi_COVID-19_bagi_Tenaga_Kesehatan_Revisi_TTD150520.pdf

Kemenkes RI. (2021). Infeksi Emerging Kementerian Kesehatan RI. Retrieved February 11, 2021, from https://covid19.kemkes.go.id/situasi-infeksi-emerging/situasi-terkini-perkembangan-coronavirus-disease-covid-19-11-februari-2021

Kodish, S. R., Bio, F., Oemcke, R., Conteh, J., Beauliere, J. M., Pyne-Bailey, S., … Wirth, J. P. (2019). A qualitative study to understand how Ebola Virus Disease affected nutrition in Sierra Leone—A food value-chain framework for improving future response strategies. *PLoS Neglected Tropical Diseases*, *13*(9), e0007645. Retrieved from https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0007645

Kodish, S. R., Simen-Kapeu, A., Beauliere, J.-M., Ngnie-Teta, I., Jalloh, M. B., Pyne-Bailey, S., … Wirth, J. P. (2019). Consensus building around nutrition lessons from the 2014–16 Ebola virus disease outbreak in Guinea and Sierra Leone. *Health Policy and Planning*, *34*(2), 83–91. Retrieved from https://academic.oup.com/heapol/article/34/2/83/5309026?

Kumar, M. M., Priya, P. K., Panigrahi, S. K., Raj, U., & Pathak, V. K. (2020). Impact of COVID-19 pandemic on adolescent health in India. *Journal of Family Medicine and Primary Care*, *9*(11), 5484. Retrieved from https://www.jfmpc.com/article.asp?issn=2249-4863;year=2020;volume=9;issue=11;spage=5484;epage=5489;aulast=Kumar

Liu, W., Wang, J., Li, W., Zhou, Z., Liu, S., & Rong, Z. (2020). Clinical characteristics of 19 neonates born to mothers with COVID-19. *Frontiers of Medicine*, *14*(2), 193–198. Retrieved from https://link.springer.com/article/10.1007/s11684-020-0772-y

Lobstein, T., Baur, L., & Uauy, R. (2004). Obesity in children and young people: a crisis in public health. *Obesity Reviews*, *5*, 4–85. Retrieved from https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-789X.2004.00133.x

Maulida, F., & Setiarini, A. (2021). DAMPAK PANDEMI COVID-19 TERHADAP PELAKSANAAN PEMBERIAN SUPLEMENTASI KAPSUL VITAMIN A DI KOTA PEKANBARU. *Jurnal Kesehatan*, *12*(1), 38–49. Retrieved from https://ejurnal.stikesprimanusantara.ac.id/ejurnal/index.php/JKPN/article/view/810

Menteri Dalam Negeri. (2020). *Surat Menteri Dalam Negeri No. 094/1737/BPD tentang Operasional Pos Pelayanan Terpadu (Posyandu dalam Pencegahan Penyebaran COVID-19*.

Rosiana, H., & Sundari, A. (2021). PENGARUH KADER TERHADAP PRAKTIK KESEHATAN IBU HAMIL PADA MASA PANDEMI COVID 19. *Midwifery Care Journal*, *2*(1), 21–26. Retrieved from http://ejournal.poltekkes-smg.ac.id/ojs/index.php/micajo/article/view/6655

Shannon, F. Q., Horace-Kwemi, E., Najjemba, R., Owiti, P., Edwards, J., Shringarpure, K., … Kateh, F. N. (2017). Effects of the 2014 Ebola outbreak on antenatal care and delivery outcomes in Liberia: a nationwide analysis. *Public Health Action*, *7*(1), S88–S93. Retrieved from https://www.ingentaconnect.com/content/iuatld/pha/2017/00000007/a00101s1/art00016

WHO. (2009). *WHO child growth standards and the identification of severe acute malnutrition in infants and children. A joint statement by the World Health Organization and the United Nations Children's Fund*. Retrieved from https://www.who.int/nutrition/publications/severemalnutrition/9789241598163/en/

DOI: 10.30994/sjik.v10i1.686
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 1369-1379

WHO. (2013). *Pocket book of hospital care for children: guidelines for the management of common childhood illnesses*. Retrieved from https://apps.who.int/iris/handle/10665/332196

WHO. (2020a). *Clinical management of COVID-19: interim guidance, 27 May 2020*. Retrieved from World Health Organization website: https://apps.who.int/iris/handle/10665/332196

WHO. (2020b). *Pulse survey on continuity of essential health services during the COVID-19 pandemic: interim report, 27 August 2020*. Retrieved from World Health Organization website: https://apps.who.int/iris/handle/10665/334048

Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., … Tan, W. (2020). A novel coronavirus from patients with pneumonia in China, 2019. *New England Journal of Medicine*, *382*(8), 727–733. https://doi.org/10.1056/NEJMoa2001017