The importance of physical examination in primary health care provided by NPHW is being threatened in COVID19 times

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ABSTRACT

Physical examination has been one of the three pillars of diagnostic evaluation of illnesses. It has a larger role in the armamentarium of non-physician health workers. Due to prescriptions for social distancing in preventing COVID19, physical examination is being performed lesser than before. This poses a serious threat to the abilities of NPHW as well as to their relationship with the community.

Keywords: Community health workers, COVID19, diagnostic evaluation, non-physician health workers, patient experience, physical examination, primary health care

After training and practicing in large teaching hospitals in urban areas, when we moved to a rural hospital in central India, one thing which patients did exasperated us. When we requested patients to lie down for physical exam after the history taking, they would often lie in a prone position. Patients lying prone instead of supine were unusual for us. A few months later, after spending time in the clinics we learnt that patients in this region, always lay prone as they assumed the only reason why they would be asked to lie down was for an intramuscular shot. Of the three parts of the diagnostic evaluation, in most low resource situations, a hastily taken history would be considered enough for a diagnosis in the absence of any physical examination and absent diagnostics.

Role of Physical Examination in Primary Health Care

Of the three pillars of the diagnostic evaluation, physical examination allows one to confirm the diagnosis that is suspected on basis of the history without any additional expenditure. Physical exam also informs us about the pattern and the severity of the disease. It also allows one to rationally plan the next pillar of diagnosis- choosing laboratory investigations. Contrarily, etiology of the disease is suspected on history and confirmed on laboratory test results with examination playing a minor role.

Not performing or doing a poor physical examination are a threat to patient safety as the probability of diagnostic errors and oversights is increased.¹ A careful physical exam can help a clinician refine the next steps in the diagnostic process, can prevent unnecessary diagnostic testing, and can aid in building trust through touch, with the patient.²
In our work to develop good models of primary health care, we focus on training and mentoring non physician health workers (NPHW) at the village level so that much needed primary health care is accessible. Thus, we developed training modules in diagnosing most common and important illnesses for NPHW that included physical examination skills as needed. As we look back, we realize that our training processes were longer, required frequent iteration and more mentoring than conventional training programmes for NPHW.

We realized that there were over 24 different types of examination that our NPHW were performing in their diagnostic work up. Table 1 summarizes these examinations along with the illness diagnosed be them.

This process of diagnostic evaluation, like other processes is liable to trivialization in periphery-based care, which is where most primary health care is practiced. And it is in the availability of laboratory testing and in physical examination that this trivialization mostly manifests.

Impact of COVID19 on Physical Examination

When the COVID-19 epidemic hit India, and concerns about its rapid spread to rural areas emerged, health care systems for non COVID-19 illnesses were challenged, and shift of focus to COVID-19 care was felt all over. A striking observation we made was the elimination of physical examination of patients seeking care. Arguably health workers were doing this to minimize the risk of getting infected and in line with the advice to observe physical distancing.

Since the beginning of COVID-19 pandemic, healthcare workers in both COVID-19 and non COVID-19 care facilities maintain a distance of 1 to 2 meters from patients. Checking pulse or mere touching of hands or a handshake has been replaced, if at all, by an oximeter applied to the fingers. Even critical examination is not being done, for example, abdominal examination for uterine height or examination of the chest with a stethoscope in someone with fever and cough is not being performed.

The proportionate role that physical examination plays in primary health care is larger than in secondary or tertiary care, simply because availability of laboratory investigations as the third pillar is poorer. The unnecessary reliance on investigations has made it harder for modern-day physicians to meet the day-to-day needs of patients seeking medical care, especially in resource-limited settings.[3]

For example, a good examination of the uterine fundal height and of the lie of the fetus in an antenatal clinic in the peripheral clinics may reduce the need for doing sonography in all pregnant women. Our health workers can auscultate for rhonchi or wheeze and thus are able to confidently diagnose reactive airway disease.

| Table 1: Physical examination being performed by the Non-Physician Health workers |
|-------------------------------------------------|-------------------------------------------------|
| Physical examination                           | Diagnostic/therapeutic utility in primary health care |
| Measuring Temperature                          | Fever, Hyperthermia, Hypothermia                 |
| Checking the pulse                            | Pulse rate is a critical vital measure           |
| Blood pressure measurement                    | For hypertension, or estimating sickness in systemic infections |
| Weight check, height check                     | Nutrition and anthropometry measurement         |
| Pallor/jaundice exam of palmar creases and of lower and supra-corneal conjunctiva in the eye | Confirming presence of severe anemia and of jaundice |
| Throat exam, neck lymph node exam              | For fever and throat pain to look for pharyngitis |
| Exam for pedal edema                           | For heart failure, for severe protein malnutrition and for other reasons of hypoalbuminemia. |
| Checking skin turgor                           | Dehydration assessment in gastroenteritis        |
| Newborn care- mopping,                         | Essential newborn care at birth                  |
| Ear exam with torch or otoscope                | For ear infection or foreign body or pustule or mopping pus |
| Breast exam for malignancy, nipple formation in pregnant and lactating women | For suspecting a breast malignancy or an abscess and for well-formed nipples so that breast attachment in feeding be assessed. |
| Auscultation of the chest                      | Distinguish various lung and pleural cavity illnesses |
| Cardiac auscultation                            | Examination for life, and to pick up a murmur or signs of CHF |
| Palpation of the abdomen for an abdominal lump | Narrow down differential diagnosis              |
| Spleen enlargement                             | Considering malaria or enteric fever in a febrile person |
| Abdominal exam for pain abdomen for quadrant of pain | In evaluation of acute abdomen                    |
| Umbilical examination                          | For umbilical infection and discharge            |
| Abdominal Palpation for uterine size and lie. | Key assessment of fetal growth antenatally and lie |
| Per Speculum/Per Vaginum Exam                  | Examination of infection, or screening of a malignancy of the reproductive tract, or insert a Intrauterine contraceptive device |
| Examining perianal area                         | Fissure in ano, or external hemorrhoids, or for fistula in ano |
| Leprosy nerve examination                      | For neuritis and for nerve enlargement in leprous, and for neuroanaesthesia |
| Blood sampling                                 | Drawing blood sample for laboratory tests, from a capillary or venous route |
| IM Injections for acute psychotic episodes      | Emergency management of someone with Acute psychosis |
| Wound Dressings                                | Cleaning and dressing of lacerations and abrasions and burns |
Examination of the abdomen in a young man who presents with an acute abdomen and vomiting might hasten the referral of a person with acute appendicitis to a surgical facility.

Telemedicine is being offered as a solution to improve access to clinical diagnosis and treatment especially in the peripheral health facilities, and is being encouraged in these pandemic times. Telemedicine suffers from larger emphasis on history and on some point of care tests and hardly any physical examination, which poses limitations to its effectiveness in reaching a clinical diagnosis.

**Threat to Primary Health Care Provided by Non physician Health Workers**

Due to instructions handed down to the peripheral workers compounded by the media blitz about the risk of COVID acquisition, NPHW have also stopped doing physical examination as part of their diagnostic evaluation. Trust in their clinical skills and personal rapport they had built with the community they had served are seriously at risk due to physical examination having disappeared in the armamentarium of the NPHW. We should provide appropriate personal protection equipment to all NPHW and allow them to continue with their important work in primary health care.

Community level health workers that we work with are especially upset at these developments. One, they find their ability to reach a diagnosis compromised frequently. Two, they fear losing skills in doing certain examination in case this recent trend sustains. Three, they already see the carefully built over the year trust of the communities in non-physician health workers eroding. This loss of trust in NPHW poses a serious risk to primary health care for communities in low resource areas.

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There are no conflicts of interest.

**References**

1. Verghese A, Charlton B, Kassirer JP, Ramsey M, Ioannidis JPA. Inadequacies of physical examination as a cause of medical errors and adverse events: A collection of vignettes. Am J Med 2015;128:1322-4.

2. Verghese A. Treat the patient, not the CT scan. The New York Times. 2011 February 26; [August 5, 2015]; Available from: https://www.nytimes.com/2011/02/27/opinion/27verghese.html.

3. De Freitas S, Connolly C, Sharif F. Back to the bedside: Cutting costs with physical examination skills. Clin Anat 2017;30:431.

4. India. National Health Mission. Guidelines for Tele-medicine services in Ayushman Bharat-Health and Wellness Centres (HWCs). New Delhi; 2019. Available from: https://nhm.gov.in/New_Updates_2018/NHM_Components/Health_System_Strengthening/Comprehensive_primary_health_care/letter/Telemedicine_Guidelines.pdf.

5. Pandey N, Srivastava RM, Kumar G, Katiyar V, Agrawal S. Teleconsultation at a tertiary care government medical university during COVID-19 lockdown in India – A pilot study. Indian J Ophthalmol 2020;68:1381-4.

6. Catapan S, Calvo M. Teleconsultation: An integrative review of the doctor-patient interaction mediated by technology. Rev Bras Educ Med 2020;44:e002.

7. Pappas Y, Vseteckova J, Mastellos N, Greenfield G, Randhawa G. Diagnosis and decision-making in telemedicine. J Patient Exp 2019;6:296-304.