

## A RAPID EVIDENCE SYNTHESIS REPORT

Date: 10 February 2017

### SYNTHESIS REQUEST

*How best to triage all walk-in patients in non-emergency primary healthcare facilities to ensure that those with the most urgent medical needs get the timeliest service?*

### KEY MESSAGES

1. No evidence was found of a system developed to triage all patients presenting at non-emergency primary healthcare (PHC) facilities.
2. A screening tool for children under 5 is being developed and tested for use in PHC facilities in the Western Cape.
3. A patient sorting system, though developed to improve patient access to a PHC facility, improved patient flow and could potentially serve as a triage system.
4. A triage system should be brief, easy to use, and validated.

### BACKGROUND

For the purposes of this synthesis, we defined triage as a prioritisation system, ensuring that patients with the most urgent medical needs get the timeliest service<sup>1</sup>. Triage systems are almost exclusively developed for use in emergency units<sup>2</sup>.

### PROBLEM STATEMENT AND SYNTHESIS AIM

In Western Cape Department of Health non-emergency PHC facilities, there is no standard triage system that identifies and prioritise patients with the most urgent medical needs. The aim of

#### Who requested the synthesis?

Dr. Hassan Mohamed, a public health specialist at the Western Cape Department of Health

#### ✓ Included in the synthesis

- Research findings
- A narrative report of a patient sorting system that could serve as a triage system for the most common illnesses presenting in non-emergency PHC facilities

#### ✗ Not included in this synthesis

Evidence of effectiveness

#### Preparing the synthesis

We prioritised systematic review evidence in the past 5 years, conducted in low-and-middle income countries. Failing to find any, we included primary studies without limiting the period or income setting. Additionally, we consulted with experts. Four reviewers screened the search results and agreed on including studies.

this synthesis was to find such a system that is relevant to these settings, and assess the research evidence on their effectiveness.

## SYNTHESIS

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1. *No systematic reviews or primary studies were found that describe and assess the effectiveness of triage systems developed for patients presenting at non-emergency PHC facilities.*
  - a. Internationally known and validated systems, such as the *South African Triage Scale*, the *Australasian Triage Scale* and the *Manchester Triage System*, have been developed for, and are used in, emergency units<sup>2,3,4</sup>.
  - b. Triage systems used in non-emergency PHC facilities are used for specific illnesses, for example, in labour - and delivery units, community mental health services and specialised dental surgery<sup>3</sup>.
2. *A screening tool for children under 5 is being developed and tested for use in PHC facilities in the Western Cape*
  - ✓ Dr. Stevan Bruijns and Prof. Lee Wallis who are experts in Emergency services, reported that a simple screening tool for under 5 year-old children presenting at non-emergency PHC facilities is being developed and piloted in the Western Cape<sup>5</sup>.
  - ✓ The tool is described as easy and rapid to use, even by non-clinical staff.
3. *A patient sorting system, though developed to improve patient access to a PHC facility, improved patient flow and could potentially serve as a triage system<sup>6</sup>*

Though this study cannot directly be used to answer our question, we present it because it points to the possibility of developing a patient sorting system in non-emergency PHC facilities that can triage patients.

### The setting

The system was developed and implemented in a Swedish non-emergency PHC facility that serve a low socio-economic community, including a large group of international immigrants. The staff included general practitioners, nurses, and a rehabilitation team consisting of physiotherapists and occupational therapists, psychologists and medical counsellors.

### The system

- ✓ The system was based on the *Manchester Triage System* and used to assess and sort patients presenting with common illnesses usually seen in non-emergency PHC facilities.
- ✓ A nurse or doctor used the manual to rapidly sort patients to the appropriate health professional in the facility.

### The results

A non-experimental study design was used to assess its effectiveness and feasibility.

- ✓ The system assisted doctors and nurses to correctly sort patients to the appropriate professional for treatment.
- ✓ There were no medical backlashes with patients wrongly referred, treated, or receiving delayed treatment.

4. *A triage system should be brief, easy to use, and validated*

Internationally well-published triage expert, Dr Katherine Harding<sup>7</sup>, offered the following key lessons on an effective triage system:

- ✓ Consider using a list of obvious enough symptoms that will enable a non-clinical staff member to give priority access to patients presenting with such symptoms.
- ✓ Do not complicate the system with numerous categories and service points.
- ✓ Reliability of triage tools is often difficult to establish, therefore use the tool as a guide and do not over-estimate its value.
- ✓ Validate the system.

## IMPLICATIONS

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From our search, no such triage system for PHC is currently validated and available.

We suggest a meeting with Dr. Stevan Bruijns and Prof. Lee Wallis to discuss their current triage work and how it may contribute to plans within PHC facilities.

## SYNTHESIS TEAM

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## REFERENCES

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1. Azeredo TRM, Guedes HM, Rebelo de Almeida RA, Chianca TCM, Martins JCA. (2015). Efficacy of the Manchester Triage System: a systematic review. *International Emergency Nursing*, 23(2):47-52.
2. Ebrahimi M, Heydari A, Mazlom R, Mirhaghi A. (2015). The reliability of the Australasian Triage Scale: a meta-analysis. *World Journal of Emergency Medicine*, 6(2):94-99.
3. Harding KE, Taylor NF, Leggat SG. (2011). Do triage systems in healthcare improve patient flow? A systematic review of the literature. *Australian Health Review*, 35(3):371-383.
4. Rominski S, Bell SA, Oduro G, Ampong P, Oteng R, Donkor P. (2011). The implementation of the South African Triage Score (SATS) in an urban teaching hospital, Ghana. *African Journal of Emergency Medicine*, 4(2): 71-75.
5. Personal communication with Stevan Bruijns (Senior lecturer: Emergency Medicine, Cape Town) and Lee Wallis (Professor and Head of Emergency Medicine: University of Cape Town, Professor; Head of Emergency Medicine: Stellenbosch University; Head of Emergency Medicine: Western Cape Government) on 12 December 2016.

6. Thorn J, Maun A, Bornhöft L, Kornbakk M, Wedham S, Zaffar M, Thanner C. (2010). Increased access rate to a primary health-care centre by introducing a structured patient sorting system developed to make the most efficient use of the personnel: a pilot study. *Health Services Management Research*, 23:166-171.
7. Personal communication with Katherine Harding (Allied Health Senior Research Fellow at Eastern Health, and Adjunct senior lecturer at La Trobe University, Australia) on 30 January 2017.

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