

## ABSTRACT

### **Introduction**

Health system responsiveness is the ability of the health system to meet the population's legitimate expectations regarding their interaction with the health system, apart from expectations for improvement in health or wealth. It is imperative that Sri Lanka's health system be responsive to changes in the non-health expectations of the country's rapidly ageing population suffering from non-communicable diseases (NCDs). Previous studies have assessed health system responsiveness only from the perspective of clients' experience. A more holistic assessment of the patient-provider interaction, to include the status of institutions in providing responsive care, remains an unfulfilled need.

### **Objectives**

To assess responsiveness of the health system in providing follow up care for elders aged 60 to 74 years with chronic NCDs through state sector primary medical care institutions (PMCI) in the Anuradhapura Regional Director of Health Services (RDHS) area and its associated factors.

### **Methods**

The study comprised four components. In Component I, a tool (named Responsiveness Experience of Elders in Primary care – NCDs - Sinhala (REEP-NCD-S)) to assess the experience of responsiveness of elders with chronic NCDs when accessing follow up care at state sector PMCI was developed and its validity, reliability and acceptability were evaluated and confirmed. REEP-NCD-S comprised 24 items arranged in six domains namely, being treated with dignity; confidentiality of personal information; ease of access to services; adequacy and quality of basic facilities; communication; and client's choice.

In Component II, a hospital based cross-sectional study was conducted to assess the experience of responsiveness among 1220 elders (between the ages of 60 to 75 years) with chronic NCDs accessing follow up care at medical clinics of 30 eligible PMCI in Anuradhapura RDHS area. Samples from each PMCI were drawn based on probability proportional to the size of the medical clinic attendees and selection of study units assigned to each PMCI was by systematic sampling. Information on client's experience were obtained through the validated REEP-NCD-S which was an interviewer

administered questionnaire. Client's experience was classified as good/poor based on predetermined minimum standardised scores for each domain.

Factors associated with the experience of responsiveness were conceptualized to be at the levels of individual, family/community related and health services related. The present study determined the factors associated with good experiences of responsiveness by performing multivariate analysis using binary logistic regression.

In Component III a tool to assess the status of state sector PMCI in providing responsive follow up care for elders with chronic NCDs was developed and its validity confirmed by a panel of experts. The tool was an informant-based reporting format to be administered to an informant appointed to represent the PMCI, with observed verification of specific items. The tool contained 39 items under the corresponding six domains of the REEP NCD-S with an additional domain on client feedback and engagement.

In Component IV, a descriptive cross-sectional study was used to assess the provision of responsive follow up care for elders with NCDs by all eligible PMCI (n=30) selected in Component II. The PI performed the assessment in all institutions. Institutions were classified as providing 'good' or 'average' responsive care based on predetermined minimum standardised scores for each domain.

### **Results:**

The REEP-NCD-S was found to be a valid, reliable and acceptable tool to assess the experience of responsiveness of elders with chronic NCDs when accessing follow up care at state sector PMCI, measured across six domains. Similarly, the tool developed to assess the status of state sector PMCI in providing responsive follow up care for elders with chronic NCDs was found to be valid and reliable for this purpose.

A total of 1125 elders attending medical clinics at PMCIs participated, with a response rate of 92.2%. The median age was 65 years (IQR 62.0-70.0), 71.8% were females; 94.6% were Sinhalese; and 94.4% resided in the rural sector.

Almost two-thirds (64.4%; 95% CI: 61.5-67.2%) of elders with chronic NCDs accessing follow up care at state sector PMCI in Anuradhapura RDHS area rated their experience of responsiveness as 'good' in all the six domains. A majority of clients reported good experience of responsiveness in the domains of : being treated with dignity (84.2%; 95% CI: 82.1-86.3%); confidentiality of personal information (95.8%; 95% CI: 94.7-97.0%); ease of access to services (82.8%; 95% CI: 80.7-85.1%); quality of basic facilities

(92.8%; 95% CI: 91.3-94.3%); communication (90.2%; 95% CI: 88.5-92.0%); and client's choice (97.7%; 95% CI: 96.8-98.6%). Most respondents perceived communication (80.0%) and quality of basic facilities (79.4%) as very important, and the least number of respondents (54.5%) perceived client's choice as very important

The percentage of PMCI found to have good and average responsive care in each domain were 40% and 43.3% for being treated with dignity; 60% and 40% for confidentiality of personal information; none and 76.7% for ease of access to services; none and 50% for quality of basic facilities; none and 40% for communication; 16.7% and none for client's choice and 43.3% and 56.7% for client feedback and engagement.

Eight factors were found to be significantly associated with having a good experience of responsiveness when controlled for the effect of confounding. Individual factors found to be positively associated with having a good experience of responsiveness were having an overall self-rated health over the preceding three months of good or very good (adjusted OR=2.4; 95% CI: 1.8-3.2;  $p<0.001$ ) and having never/seldom experienced negative feelings over the preceding four weeks (adjusted OR=2.2; 95% CI: 1.6-3.1;  $p<0.001$ ). Of the family/community related factors, being currently married with the spouse living was found to be associated with having a good experience of responsiveness (adjusted OR=1.4; 95% CI: 1.0-1.8;  $p=0.034$ ). The health services related factors found to be positively associated with a good experience of responsiveness were; distance from home to the institution less than 5 km (adjusted OR=1.6; 95% CI: 1.2-2.2;  $p=0.001$ ); time taken from arrival at the PMCI to registration being 60 minutes or less (adjusted OR=2.0; 95% CI: 1.3-3.2;  $p=0.002$ ); waiting time at the dispensary being 60 minutes or less (adjusted OR = 2.3; 95% CI: 1.5-3.5;  $p<0.001$ ); and not losing a daily income by attending the medical clinic (adjusted OR=4.1; 95% CI: 1.8-9.4;  $p=0.001$ ). Only choosing the institution because of availability of medicines and investigations was found to be negatively associated with a good experience of responsiveness (adjusted OR=0.2; 95% CI: 0.1 -0.5;  $p<0.001$ ).

### **Conclusions and Recommendations:**

The REEP-NCD-S is a valid, reliable and acceptable tool to assess the experience of responsiveness of elders with chronic NCDs when accessing follow up care at state sector PMCI. Experience of responsiveness of elders accessing follow up care for chronic NCDs at state sector PMCI in Anuradhapura RDHS area was mostly good, with two thirds of clients (64.4%;95% CI: 61.5-67.2%) having had a 'good' experience of

responsiveness. The study identified modifiable factors at individual, family/community and health services levels which can inform targeted interventions to further improve experience of responsiveness of elders when accessing NCD care services at PMCIs. Despite the majority of elders with chronic NCDs accessing follow up care at state sector PMCI in Anuradhapura RDHS area rating their experience of responsiveness as ‘good’, the study showed several areas for improvement at PMCI especially for the domains ease of access; quality of basic facilities; communication and client’s choice. The gaps were shown to be in line with the ongoing healthcare delivery reform of the Ministry of Health for strengthening primary health care with a major focus on NCD outcomes.

The study recommends to improve clients’ experience of responsiveness by taking actions to reduce client waiting times, avoid loss of daily income to those who are currently employed, reduce the distance travelled by clients by strengthening PMCI which are close to the homes of clients, and improve the overall general health status and mental health status of clients. The institution response in providing responsive care is recommended to be improved by expediting the implementation of primary healthcare strengthening activities.

### **Key Words**

Health system responsiveness, clients’ experience, non-communicable disease care, primary healthcare strengthening