Early identification of impaired vision development from infancy enabling timely intervention is a crucial element of the national child health surveillance (CHS) programme. The most common predisposing conditions in preschool children are strabismus (squint) 7% and refractive error (focusing problems requiring glasses) 10% which, if left untreated, may interfere with development of visual acuity. Impaired vision is far-reaching and can have a significant developmental, emotional and social/educational impact if detection is delayed. The rationale for the project was underpinned by a number of issues: Health Visitor (HV) confidence and competency levels in the assessment of children’s visual development was low, the mandated national child health developmental assessment toolkit did not sensitively support robust enquiry and identification of vision concern, incomplete assessments by HV staff in the vision development outcome domain and inconsistent referral RFA routes and information. Theory of Change: Implementation of an evidence based, standardised Pathway of Care in partnership with the Orthoptics service will improve early identification, request for assistance and prompt treatment of pre-5 children prior to commencing nursery or school.

Aim: ‘By December 2018, 50% increase in Identification of new vision concerns by health visitors at the 27 month child health review across South Lanarkshire’.

Methodology

Outcomes and Impact

**Figure 1.** shows how we used Q tools during the improvement journey utilising an adapted Institute For Healthcare Improvement breakthrough series. Due to low numbers and to accelerate learning we established a data collection method from all 10 HV teams, which was supported by a formal staff learning set by the Orthoptics service professional lead. (Figure 2.) allowed us to explore the causes and effects of our problem and identify our change package components below:

### Change Package


Ongoing analysis of vision concern data through the national child health system will inform sustained success of the change package and on an individual basis through the child plan.

### Key Learning

- Workforce access to appropriate training and continuous professional development emerged as an integral investment and lasting element of the improvement project. A Learning set was welcomed and attended by 120 South HV staff with positive evaluation. The learning set was subsequently rolled out across Lanarkshire Family Nurse Partnership, North Health & Social Care Partnership and Ayrshire and Arran
- All components of the change package are transferable across teams nationally. QI training and approach enabled effective joint discipline working and streamlining of appropriate pre-5 referrals to specialist services supporting waiting list challenges
- Exploring incorporating key vision messages from the Parent Information Leaflet (PIL) into National ‘Book start’ resource.

### Outcomes and Impact

**Figure 2.** Cause and Effect Diagram

**Figure 1** Source: Discovery December 2018

**Figure 2** Source: Discovery December 2018

**Chart 1** illustrates a 66.4% increase in identification of new concerns from the baseline of 0.97%, achieving our improvement aim. In the period of January - May 18 the chart shows a decrease influenced by a number of contributing organisational factors (changing workforce demographics (recruitment of new Health Visitors) and the introduction of two new assessments.

**Chart 2** demonstrates sustained improvement and a 89% reduction in the number of incomplete assessments of the vision domain.

Staff reported the Red Amber Green coded ‘trigger’ questions incorporated into the HV surveillance process provided a consistent approach for risk factor stratification and an ‘aide memoir’ particularly for newly qualified health visitors. Families acknowledged that the Parent Information Leaflet (PIL) was as a helpful resource and provided appropriate information for them to seek support.

### Conclusion

Collaborative working with Orthoptics Services to improve vision outcomes in preschool children is in the context of rising demand for specialist services and changes within universal health visiting services meaning we must make the most of all resources available to us both professional and financial. The Orthoptics pathway takes expertise from different professional groups where a need has been identified and combines it to provide support for one of the largest early years workforces in an effort to improve child development outcome.

### Next Steps

- Analyse CHS data to review impact after implementation
- Parent focus group feedback of Parent Information Leaflet (PIL)

Further information contact: Maureen.O'Donnell@lanarkshire.scot.nhs.uk or sandra.Macinnes@lanarkshire.scot.nhs.uk