to 0.16% in 2013 with 0% false negatives for both 2013 and 2015. The true positive rate was 0.090% or 1/1125 compared to 0.098% or 1/1025 in 2013. Over the past 36 months, 100% of the external proficiency test results were acceptable for all tests and specimens. Aminoacidopathies account for 52% of the disorders (Homocystinuria (n = 4), CitrullinemiaII (n = 2), PKU (n = 6)), Fatty Acid Oxidation Disorders (MCAD (n = 3), CUD (n = 2), SCAD (n = 2)) 26%; Organic acidemias (3MCC (n = 3)) 13% and 4.3% CPS/OTC.

P75. Newborn Screening in Buenos Aires Province—Argentina. 24 Years of Experience

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Background**:** Newborn Screening (NBS) in Buenos Aires Province (BAP) was implemented by Fundacion Bioquimica Argentina (FBA) together with Children's Hospital "Sor Maria Ludovica" (HSML) following a sequential process: 1991 Phenylketonuria (PKU), 1992 Congenital Hypothyroidism (CH), 1995 Cystic Fibrosis (CF) and Galactosemia (GAL), 1997 Congenital Adrenal Hyperplasia (CAH) and Biotinidase Deficiency (BD), and 2001 Maple Syrup Urine Disease (MSUD). Firstly, all the diseases were screened by request, without a program organization. Just in 1995, the "Diagnostic and Treatment of Congenital Diseases Program" (Prodytec) was implemented by the BAP Ministry of Health, becoming the first organized and centralized program implemented in Argentina. In a first stage, it covered only for PKU and CH, giving fulfillment to the law in force. In December 2008, a new law was enacted expanding the panel to CF, GAL, CAH, BD and MSUD, being mandatory in practice from 2010 onwards.

Objective: To present the results of 24 years of NBS experience in BAP.

Methods: The functional organization of the program includes screening at the FBA NBS Laboratory, and diagnosis, treatment and follow-up at the HSML, giving free of charge coverage to all newborns (NB) born in public hospitals since July 2010. NBS was made using in-house fluorometric methods for PKU, GAL and MSUD, an in-house colorimetric method for BD, and AutoDELFIA for CH, CF and CAH.

Results and Conclusions**:** Until December 2014, 3,634,953 NB were screened for PKU (PKU: 1:26,926, HPA: 1:23,604); 3627,152 for CH (1:2169); 1,762,642 for CF (1:8314); 1,427,775 for GAL (GAL-T Def.: 1:75,146); 1,317,842 for CAH (Salt Wasting CAH: 1:14,324); 1,054,292 for BD (Profound BD: 1:131,787) and 830,040 for MSUD (1:118,577). The program coverage in 2014 reached 97.2% for public hospitals and 62.8% for the total of BAP (~32% of NB remaining are tested in other laboratories). Currently, Prodytec makes an important contribution to NBS in Argentina testing around 210.000/year, which represent the 27% of NB born in the country.

P76. External Quality Assurance Program for Neonatal Screening of Glucose-6-Phosphate Dehydrogenase Deficiency

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The national neonatal screening program for G6PD deficiency was started in 1987 and 1996 in Taiwan and Philippines, respectively. To assess the reliability and assure the quality of the screening and confirmatory tests, external quality assurance (EQA) programs for G6PD tests were developed. The QC materials were prepared from human blood with human G6PD. Periodically (2–3 month), EQA survey samples were sent to participating laboratories. The test results were submitted online and the summary reports were published on the website. <g6pd.qap.tw>.

Currently, 50 screening laboratories (including 4 reagent manufacturers) from 15 countries and 44 referral laboratories in Taiwan and Philippines are participating in the EQA program. Since 1999, 99 EQA surveys for screening test were performed, 202 (10.2%) unsatisfactory reports were found. The unsatisfactory results were mainly caused by inappropriate cut-offs. Between 1988 and 2015, 192 EQA surveys were sent to referral laboratories in Taiwan, 306 (8.6%) unsatisfactory reports were found. Since 2007, the error rates have been decreased to less than 4%. Inter-laboratory C.V. for the quantitative test has reached < 10% in recent years. The long term (7 years) intra-laboratory precision (C.V.) of the referral laboratories in Taiwan were 6.6% (1.6%~20.5%). From 2009 to 2015, 35 EQA surveys have been carried out for the newly established network of referral laboratories in Philippines, 81 (18.8%) unsatisfactory reports were found. Inter-laboratory C.V. in Philippines were between 6.6% and 25.0%, which is lower than those found in other EQA programs (e.g., CAP, RCPA) for G6PD quantitative test. These EQA programs have been useful to improve the G6PD tests quality, and might be a reference to adjust the cut-offs for the screening test.

P77. Effect of Introducing National Criteria on the Newborn Blood Spot Avoidable Repeat Rate

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Introduction: For many years, the West Midlands Newborn Screening laboratory has focussed on training of Midwives to improve the quality of newborn screening blood spot samples. The avoidable repeat rate (ARR) has been consistent over the years (~4.0%), yet still above the national standard of 2.0%.

The NHS newborn blood spot screening programme launched a new blood spot quality initiative in April 2015 to improve blood spot quality and standardise rejection/acceptance criteria across the newborn screening labs in the UK. We report the ARR before and after the national criteria and investigate areas for further improvement.

Method: The calculated ARR from all samples received from February 2015 to February 2016 were reviewed. ARR was categorised into insufficient, unsuitable, too soon after blood transfusion, too young 4 days.

Results: The ARR decreased to 2.0% with the introduction of the new criteria. In September, a new multipunch was implemented, the Panthera-Puncher 9, which uses 'intelligent' punching. The use of the punch initially increased the ARR but then the ARR decreased as the importance of improving blood spot quality was communicated to healthcare professionals.

Conclusion: Acceptance/rejection criteria clearly has an impact on the ARR, as does the use of 'intelligent' punching. Consistent monthly reports to screening leads and QA teams emphasising the importance of blood spot quality has reduced the ARR. Continued education and training is required to reinforce the importance of blood spot quality in newborn screening.

P78. Introducing the Dutch Neonatal Screening Programme in Overseas Dutch Caribean Netherlands. Organisational and Logistic Challenges Overcome

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Introduction: As of October 2010 the status of the overseas parts of the Dutch Kingdom changed: they now were special municipalities within the Kingdom of the Netherlands and as such, they were entitled to the same public health care, including neonatal screening (requested by the Island-authorities in 2011). Upon ministerial decision a feasibility study was performed. Prerequisites for this feasibility study were: the screening should be identical to the screening in continental Netherlands, preferably, existing infra-structure should be used, and clinical referral should preferably be organized locally.