Successful closure of PDA was seen in 18/23 (83%) patients after the following treatment regimens with Paracetamol:

Abstract 220 Table 2

Outcome	Number of patients
1 course Paracetamol	10
2 courses Paracetamol	2
1 course Ibuprofen + 1 course Paracetamol	5
2 courses Ibuprofen + 1 course paracetamol	1

Of the remaining 5 patients, outcomes were as follows:

Abstract 220 Table 3

Outcome	Number of patients
Successful closure of PDA with 1 course Ibuprofen following 1 failed course Paracetamol	3
1 failed course of paracetamol, required surgical ligation	1
2 failed courses paracetamol, 1 failed course Ibuprofen, required surgical ligation	1

Conclusions Paracetamol appears to be a safe and effective medical treatment for haemo-dynamically significant PDA in preterm neonates who either have contra-indications to Ibuprofen or where Ibuprofen therapy has failed. The risk of toxicity was low (0% in this study) and the closure rate of PDA following treatment was high (83%). Further studies are needed to determine clinical effectiveness in larger sample sizes and to agree a consensus on how many courses of medical management are appropriate before referring for surgical ligation.

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10-YEAR REVIEW OF PATHOGENS AND THEIR ANTIMICROBIAL RESISTANCE PATTERNS AT A TERTIARY NEONATAL INTENSIVE CARE UNIT. DO WE HAVE THE RIGHT ANTIBIOTIC POLICIES?

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Background The presentation of neonatal sepsis is typically non-specific, and empirical antimicrobial treatment is generally commenced before a causative organism is identified. Using surveillance systems to identify pathogens and their antimicrobial resistance patterns, helps to inform clinicians of what isolates to target and assists them in using antibiotics judiciously.

Local antibiotic guideline First line antibiotics:

- Penicillin + Gentamicin.
- Second line: Amoxicillin + Gentamicin + Flucloxacillin.
- Second line where CoNS identified or very likely (e.g., preterm with long line but not systemically 'sick'): Vancomycin
- Third line: Vancomycin and Ceftazidime

Objectives

- To compile all positive cultures from blood, cerebrospinal fluid and respiratory secretions in a 10 year period
- To identify common causative pathogens in the neonatal intensive care unit.
- To detect susceptibility and resistant patterns to antibiotics recommended in local guideline

Methods Retrospective analysis of data from the microbiology department between 1st April 2010 and 31st March 2020.

Data included all positive blood, cerebrospinal fluid, and respiratory secretions cultures, together with their antimicrobial susceptibility and resistance profile

Results A total of 1642 positive cultures were identified in the 10-year period, from which 68.4% came from respiratory secretions, 28.9% from blood and 2.7% from cerebrospinal fluid samples.

The five most prevalent organisms in all combined cultures were Coagulase negative staphylococci (CoNS), *Staphylococcus aureus*, *Escherichia coli*, *Enterobacter* species and *Klebsiella pneumoniae*.

CoNS was the most prevalent organism in blood and cerebrospinal fluid cultures, at 56% and 34.88% respectively. GBS was always susceptible to Penicillin and *E. coli* was resistant to Gentamicin in 5% of cases.

CoNS was 100% susceptible to Vancomycin and Linezolid but mostly resistant to Gentamicin and Flucloxacillin.

Conclusions Similar pathogens were seen to national data from other NICUs. No significant difference was seen for most prevalent pathogens in a 10-year period.

First line antibiotics in our local guideline provided good coverage for early onset sepsis organisms.

Second line antibiotics did not cover CoNS, for patients without central line in situ. However, they provided good cover for all other prevalent pathogens involved in late onset sepsis.

A step up from third line antibiotics is considered, when resistant organisms are suspected or grown, in discussion with the microbiologist.

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ACHIEVING SGD 3 GOALS WITH GENETICS, INTERNET TECHNOLOGY AND DATA-DRIVEN IMPROVEMENT

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Background Some 93 million children under 15 years of age live with a moderate or severe disability (WHO, 2015). Disabilities, such as hearing deficit, cerebral palsy, developmental disabilities, turn out to have genetic causes. In 2019 the WHO launched a classification of digital health interventions v1.0¹: Shared language to describe the uses of digital technology for health. In lower and middle-income countries the use of electronic data in medical care is still on the verge of development. Awareness of available genetic tests could be improved.

Objectives International codes and classification are designed to support data harmonization and data exchange. We questioned how new techniques can promote healthy lives and well-being.

Methods Most states provide maternal and child health handbooks (WHO) containing essential information about

Abstract 223 Table 1

	Clinic	Feature in LOINC	Diagnosis	Genes in LOINC
SDS	Delayed weight gain	LP36298-5 Failure to thrive	Pancreas insufficiency	41764-2SBDs gene-targeted mutation analysis in Blood or
SDS	Fatty stool	16142-2 : Fat [Mass/time] in 24 hour Stool	Pancreas insufficiency	Tissue by Molecular genetics method
SDS	Recurrent infections	751-8 Neutrophils [#/volume] in Blood by Automated count	Neutropenia	
Thal	Pale	718-7 Haemoglobine in blood	Anaemia	55234-9Alpha thalassemia gene panel - Blood by Molecular genetics method
Thal	Screening Newborns	46740-7 Haemoglobine disorders newborn screen interpretation	Hemoglobinopathy	

pregnancy, birth, growth, development, physical examination and vaccination, to promote and maintain health. We identified, among other codes, the *Logical Observation Identifiers Names and Codes*, a universal standard and electronic database for clinical care and management, applicable to child health care (such as codes 8339-4Birth weight Measured and 8287-5Head Occipital-frontal circumference by Tape measure) for registering the first feature of a (rare) disabling condition. Medical guidelines on Shwachman Diamond Syndrome (SDS) and Thalassemia Major were reviewed on recommended measurements. LOINC codes specific for SDS and thalassemia were applied in text mining for processing PubMed document sets.

Results We identified a subset of international interoperable codes to help to identify (rare) disabling conditions presenting in the first years of life. Child health handbooks can be enriched with a simple laboratory test to help diagnose diseases as a possible part of a (rare) condition.

Text mining is a powerful tool for processing PubMed document sets to identify diagnostic test in literature. Using unsupervised techniques such as clustering and spatial placement, with one can quickly gain insight into the contents of the documents, discover hidden properties and determine how to further explore and label the data.² Terms that belong to LOINC codes in filtering the whole (ranked) document set one can identify also the important rare disease papers that most likely are relevant for a medical test.

Conclusions The application of specific code-sets ensures the harmonization of data and the possibility of data exchange. As demonstrated with the LOINC the establishment of an interoperable child health record, including children with chronic illness and disabilities, is feasible. Collaboration between paediatricians, families, health system managers and data services is necessary to provide digital solutions to support the SDG3.

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IMPROVING PAEDIATRIC EMERGENCY DEPARTMENT REFERRALS TO FRACTURE CLINIC WITH THE INTRODUCTION OF A MUSCULOSKELETAL CLINIC – A RE-AUDIT

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10.1136/bmjpo-2021-RCPC.122

Background Fracture clinic (FC) and Paediatric Emergency Department (PED) have a crucial relationship in the management of musculoskeletal (MSK) injuries in children. A high volume of patients are assessed in FC and even a small number of inappropriate and non-specific referrals severely disrupts the flow of FCs.

Chelsea and Westminster Hospital, London, has seen a rapid increase in children attending PED and subsequent referrals to FC. In light of this, we set up a MSK clinic.

Objectives To reduce the number of inappropriate referrals made from the PED to FC.

Methods PED referrals to FC prior to the introduction of the MSK clinic were audited. Data was collected retrospectively from 22 consecutive FCs over a 10-week period from February 2019 to April 2019. Patient demographics, diagnosis and management were recorded for these patients. PED referrals to FC were re-audited after the MSK clinic was set up. 18 consecutive FCs were retrospectively analysed over a 9-week period from January 2020 to March 2020. The appropriateness of these referrals was compared before and after the establishment of the MSK clinic.

An appropriate referral was defined as one in which the resulting diagnosis was a fracture, and a referral was classed inappropriate if the diagnosis was not.

Results The initial audit in 2019 which included 203 children referred to FC by PED showed that 35.5% of referrals were inappropriate. After the introduction of the MSK clinic, the re-audit demonstrated an improvement, as of the 178 referrals, only 26% were non-fractures.

Most notably, the number of 'unspecified injury' referrals decreased in 2020 compared to 2019 (29% in 2019 to 9% in 2020).

Conclusions The introduction of the MSK clinic has proven an effective way of reducing the number of inappropriate and non-specific referrals made by PED to FC.

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PRESCRIPTION OF PARACETAMOL AS AN ANTIPYRETIC IN PAEDIATRICS: ANALYSIS OF PRACTICES IN A NATIONAL ACUTE AND TEACHING HOSPITAL

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Background Prescription errors represent a pervasive problem found across many hospitals and the ubiquity by which antipyretics are prescribed in paediatrics makes them a frequent source of error. Such avoidable errors not only lead to actual physical harm for the child, but also incur financial and legal costs on the service provider, dampen public confidence in the health care system and predispose to negative psychological effects on both the patient and prescriber.

Objectives Prescriptions of Paracetamol for paediatric inpatients at Mater Dei Hospital, a national acute and teaching hospital