

THE USE OF TECHNOLOGY, DIGITAL TOOLS/TECHNIQUES TO IMPROVE EFFICIENCY IN A MATERNITY WARD

LCH4007 – Component 1

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MATERNITY WARD

- Maternity wards in the NHS supply patients with care for future mothers, from pregnancy to birth to postnatal recovery. They focus on the safety of the child and mother and help support the mother throughout their journey.
- Roles such as midwives, obstetricians, neonatal nurses and anaesthetists are found in the maternity ward, as they work together to help provide a patient centric level of care.
- Technology is growing in the maternity ward; health records are now electronically stored; this then helps with communicating between the patient and also other doctors and nurses.



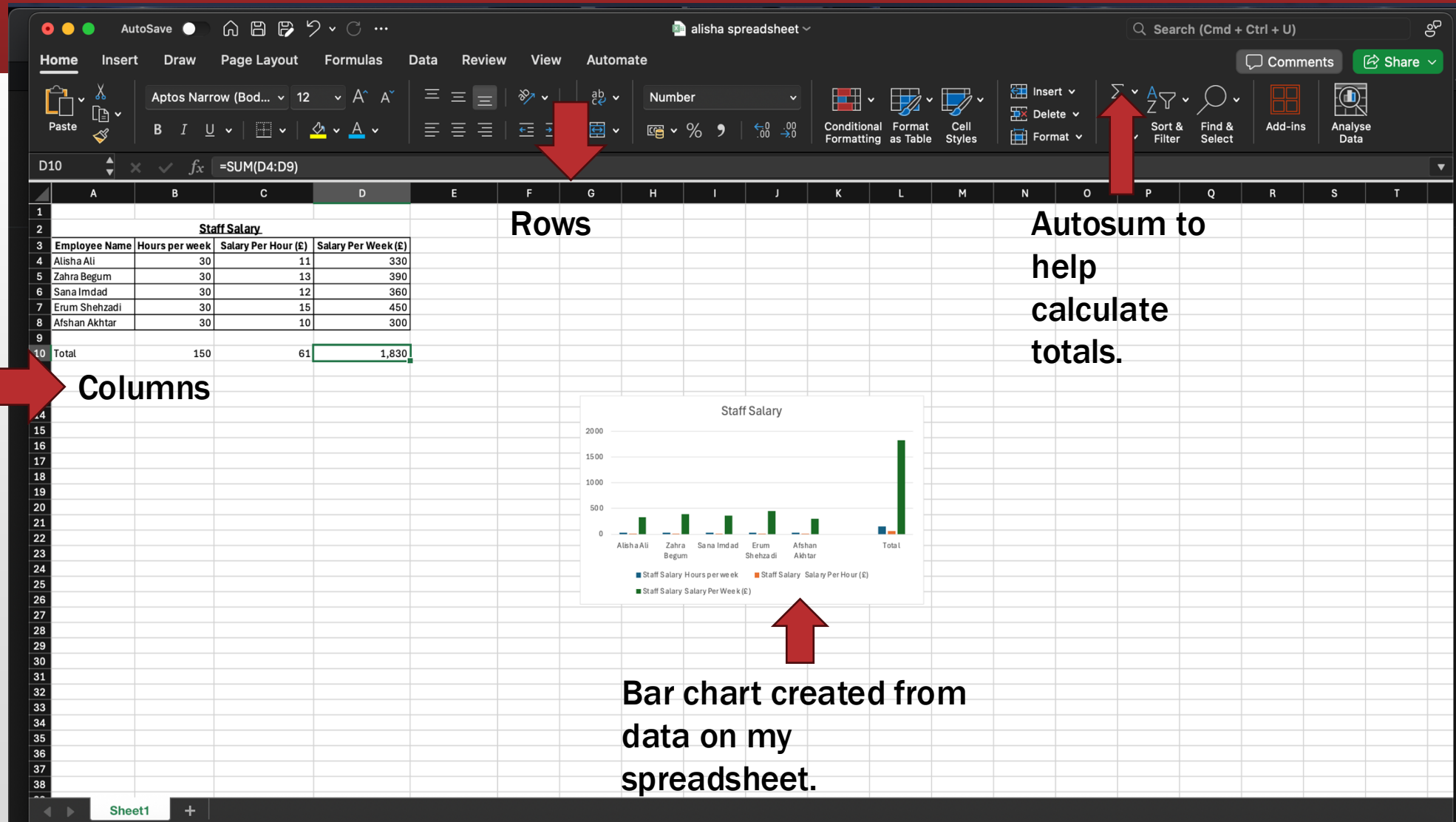
MICROSOFT EXCEL

- **What is it?** Microsoft Excel is an application that allows you to organise and analyse data via a spreadsheet.
- **When it started?** The application was published in 1985 for the public and has rapidly grown in use over the years.



- **What it can be used for?** It can be used for various tasks e.g., recording expenses, calculating employees' wages etc.
- **What can it create?** MS Excel can produce a wide range of outputs from the data entered by the user, e.g., tables, charts and reports.

MICROSOFT EXCEL EXAMPLE

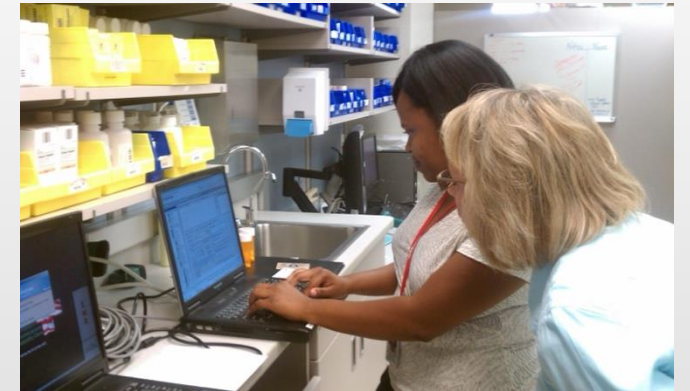


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MS EXCEL USE WITHIN THE MATERNITY DEPARTMENT

Excel is a vital tool that aids the maternity department on a daily basis from managing staff information to aiding patient care.

- ❖ It is used for patient monitoring, recording vital signs and medication administration.
- ❖ As well as that monitoring medical and non-medical equipment for both staff and patients.
- ❖ In addition, it supports with financial management. Monitoring costs and invoices.
- ❖ Also, It helps with staff rotas and handovers.



A study shows Excel helps aid with relocation of nurses at short notice and helps save costs with staffing. (Tuominen OA, Lundgren-Laine H, Kauppila W et al. (2016).

ADVANTAGES OF MICROSOFT EXCEL

- **National Maternity Data Set:** Excel can be used to collect and analyse data related to the National Maternity Data Set (MSDS).
- **Clinical Audit:** [NICE website](#) provides data collection spreadsheets in Excel format for specific audits, like the one related to complex social factors in pregnancy.
- **Baseline Assessments:** Excel tools are used to assess current practices and plan actions needed to align with guidelines and standards, such as the NICE guidelines on Safe Midwifery Staffing.
- **Maternity Care Pathways:** Excel can be used to model and visualize care pathways, helping with service planning and resource allocation.
- **Data Submission:** Excel templates are used for submitting data to national programs, such as the NHS antenatal and newborn blood spot screening programmes.



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DISADVANTAGES OF MICROSOFT EXCEL

Disadvantages of using Excel in maternity care:

- **Data security concerns:** Excel files can be at risk to data loss or unauthorized access if not properly secured, which is a concern in a healthcare setting where patient data is highly sensitive.
- **Potential for human error:** Manual data entry and calculations can lead to errors, especially in complex spreadsheets.
- **Scalability limitations:** Excel may not be suitable for handling large datasets or high volumes of data, which can be a challenge in larger maternity services.
- **Lack of built-in audit trails:** Excel does not have built-in audit trails to track changes and modifications to data, which is important for maintaining integrity and accountability.

WHAT IS MICROSOFT OUTLOOK?

- Microsoft Outlook is a widely use email application that allows users to send and receive emails, manage calendars and organise tasks.
- It was founded in 1996 and acquired by Microsoft in 1997 for \$400 million.
- It is used by over 400 million people worldwide.



HOW MS OUTLOOK IS USED WITHIN THE NHS

- Microsoft Outlook plays an important role in communication throughout the UK hospitals and departments within.
- The NHS have their own platform formed within MS Outlook called NHSmail.
- NHSmail allows healthcare professionals to send and receive patient records, test results and other confidential information securely.



MS OUTLOOK – MATERNITY DEPARTMENT

Maternity Departments use MS Outlook for multiple reasons, including patient care and administrative work.

- MS Outlook's calendar feature allow receptionists to schedule and manage appointments for antenatal and postnatal care ensuring the best use of their clinic time and resources.
 - This also includes them coordinating with other teams, such as midwives', sonographers and allows them to send referrals for their patients.
- Outlook also allows staff to manage administrative work throughout the maternity department

An evaluation found that staff members liked the use of email whilst dealing with postnatal care, seeing that it improved care and service ultimately reduced follow-up phone calls from mothers (Tzeng and Yin,2012).



ADVANTAGES AND DISADVANTAGES OF OUTLOOK

Advantages Of Outlook	Disadvantages Of Outlook
Streamlined appointment scheduling and reminders for antenatal and postnatal care improve time management and reduce missed visits.	Relies heavily on internet access, with outages potentially slowing down operations. Requires staff training and ongoing support to handle digital tools effectively. Risk of technical issues and data breaches, emails may get hacked and personal data may get leaked.
Easy referral process and centralized access to patient data, including emails, files, and appointments. Efficient daily planning helps clinics use resources effectively and stay organised.	

WHY IS DIGITAL SAFETY IMPORTANT?

Digital Safety

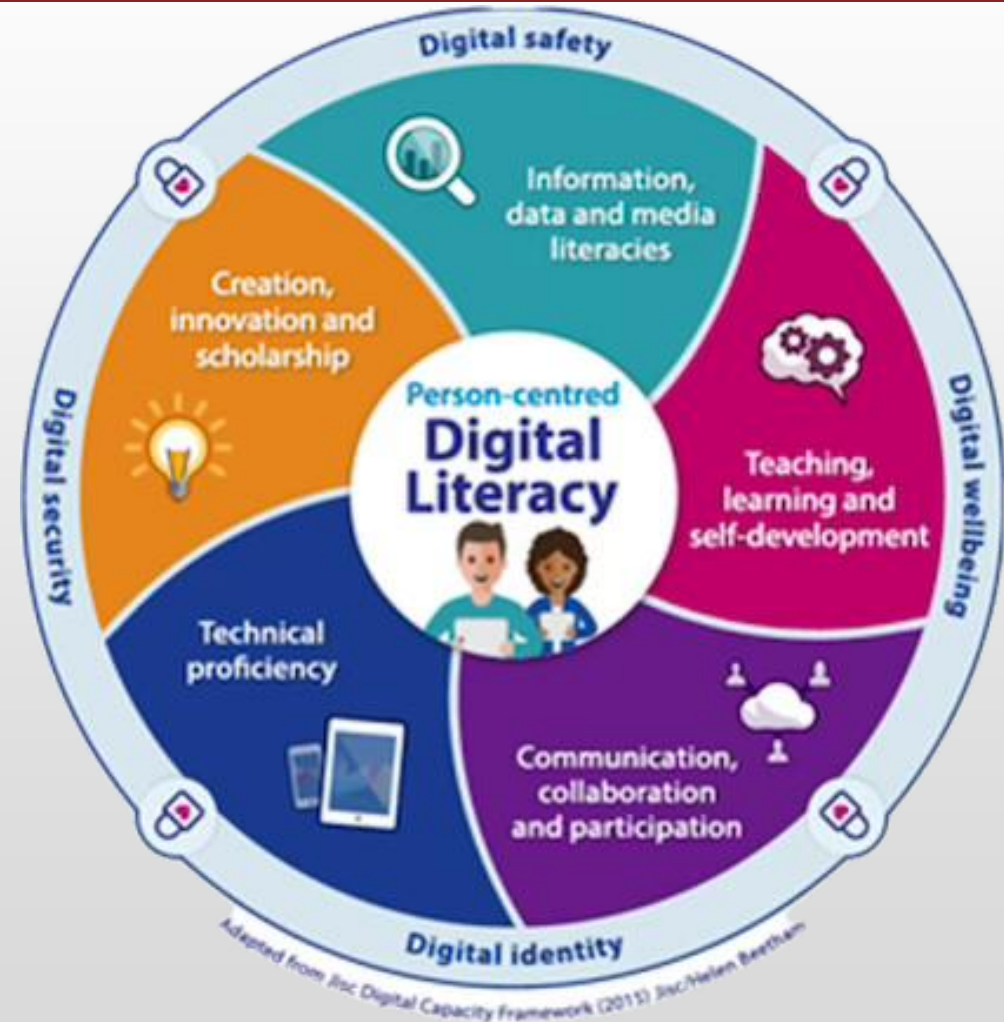
- It protects the data of patients with security systems, stopping risk of breaches and leaks by showing staff protocol.
- It also lowers the risk of any mistakes doctors can make such as wrong medication or misinterpreting issues.
- Makes sure that everything during the care is legally and ethically okay by showing NHS policies to staff.



WHY IS DIGITAL LITERACY IMPORTANT?

Digital literacy

- This helps NHS staff to easily access electronic health records, giving quicker and more efficient care.
- It improves communication with staff so there is less confusion and updates are instantly noticed.
- It gives patients knowledge on their pregnancy and helps them learn about things their doctor recommends without having to physically see them.



CONCLUSION

In conclusion, the integration of technology and digital tools in maternity wards play a vital role in improving efficiency. From Microsoft Excel spreadsheets helping with patient monitoring and Microsoft Outlook aiding with coordination between professionals and patients. As a result, they help reduce errors and free up time for staff to focus on other tasks like supporting the patients. This is key in delivering a safer and more patient centred maternity ward.



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