**Details of some of the information used to make the arguments in the business case that the proposed service was a good investment in NHS resources**

Why is medicines optimisation important?

* Medicines are the most common health intervention and are included in the majority of treatment pathways.  When considering the appropriate use of medicines, the cost of the medicine is only one factor; medicines are often not taken as intended, sub-optimal use leads to waste and lost opportunities in improving health.  A systematic review[[1]](%22%20%5Cl%20%22_ftn1%22%20%5Co%20%22)found that only 4-21% of patients achieved optimal benefit from their medicines.  Ten days after starting a new medicine, almost a third of patients are already non-adherent and of these 55% don’t realise they are not taking their medicines correctly, whilst 45% are intentionally non-adherent.[[2]](%22%20%5Cl%20%22_ftn2%22%20%5Co%20%22)  NICE Clinical guideline 76: Medicines Adherence estimates that between 33 and 50% of all medicines prescribed for long term conditions are not taken as recommended.  Adherence presumes an agreement between prescriber and patient about the prescribers recommendation and allowing time to explore the patients beliefs and perceptions to ensure they make an informed decision about treatment and use appropriately prescribed medicines to best effect.
* **Medication Errors** - Errors with medicines are common and a study in general practice[[3]](%22%20%5Cl%20%22_ftn3%22%20%5Co%20%22) found prescribing or monitoring errors were detected in 1 in 8 patients involving 1 in 20 overall prescriptions and while the vast majority of these were of mild to moderate severity, preventable errors are common. Another study on medicine use in care homes[[4]](%22%20%5Cl%20%22_ftn4%22%20%5Co%20%22) found that 69.5% of residents had experienced one or more errors with their medication.
* **Adverse Events** - Unwanted or harmful reactions to drugs or devices may occur at any time and are frequently serious enough to result in admission to hospital; a study in 2004 found that 6.5% of admissions were related to medicines and that just over 2% of patients admitted with an ADR died, approximately 0.15% of all patients admitted.[[5]](%22%20%5Cl%20%22_ftn5%22%20%5Co%20%22) A more recent study[[6]](%22%20%5Cl%20%22_ftn6%22%20%5Co%20%22) found that 14.9% of 3965 patient episodes experiences one or more adverse drug reaction (ADR) and that half of these were definitely or possibly avoidable. This same study also found that ADRs increased the length of stay in 27% of patients.

·         1- Quality of medication use in primary care- mapping the problem, working to a solution: a systematic review of the literature. 2009. Accessed at: <http://www.biomedcentral.com/1741-7015/7/50>

* [1]2 - Royal Pharmaceutical Society. Medicines optimisation: helping patients to make the most of their medicines. May 2013.

·         [1] 3- Investigating the prevalence and causes of prescribing errors in general practice 2012.  Accessed at: <http://www.gmc-uk.org/Investigating_the_prevalence_and_causes_of_prescribing_errors_in_general_practice___The_PRACtICe_study_Reoprt_May_2012_48605085.pdf>

·         [1] 4- [Care homes’ use of medicines study(CHUMS) : prevalence, causes and potential harm of medication errors in care homes for older people](file:///%5C%5Cwhits.local%5Cdata%5Cshared%5CPCT%5CCommissioning%5CSWCCG%5CMedicines%20Commissioning%5CPrimary%20Care%5CCCG%20folders%20-%20AK%20to%20sort%5CWFCCG%5CCare%20homes%27%20use%20of%20medicines%20study%28CHUMS%29%20%3A%20prevalence%2C%20causes%20and%20potential%20harm%20of%20medication%20errors%20in%20care%20homes%20for%20older%20people). Accessed at: <http://www.npc.nhs.uk/rapidreview/?p=689>

·         [1] 5- Adverse drug reactions as a cause of admission to hospital: prospective analysis of 18,820 patients. BMJ 2004. Accessed at: <http://www.bmj.com/content/329/7456/15>

·         [1] 6- Adverse drug reactions in Hospital In-patients; A prospective analysis of 3965 patient episodes 2009. Accessed at: [http://www.plosone.org/article/info:doi/10.1371/journal.pone.0004439](http://www.plosone.org/article/info%3Adoi/10.1371/journal.pone.0004439)