**Single Subject Design Project**

**Background:**
Real difficulties face the present medicinal services framework for which wellbeing experts must be readied. The present quality emergency in America's health care is all around perceived. Various ongoing investigations have prompted the end that "the weight of mischief passed on by the aggregate effect of the majority of our medicinal services quality issues is amazing" (Chassin et al., 1998:1005). In like manner, the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry (1998: 21) note that "today, in America, there is no certification that any individual will get great consideration for a specific medical issue." Estimates of the quantity of Americans biting the dust every year because of medicinal mistakes are as high as 98,000—more than the individuals who kick the bucket from engine vehicle mishaps, bosom malignancy, or AIDS The American open is disappointed with incessant consideration; 72 percent of those studied trust it is troublesome for individuals living with unending conditions to acquire the vital consideration from their human services suppliers (Harris Interactive and ARiA Marketing, 2000). Wellbeing experts are additionally concerned: 57 percent of U.S. doctors reviewed said their capacity to give quality consideration has been diminished over the most recent 5 years, and 41 percent expressed that they are disheartened from detailing or not urged to report medicinal blunders (Blendon et al., 2001); 76 percent of attendants overviewed showed that dangerous working conditions meddle with their capacity to convey quality consideration (American Nurses Association/NursingWorld.Org, 2001). An overview of more than 800 doctors found that 35 percent of them revealed mistakes in their very own or a relative's consideration (Blendon et al., 2002).

These explanations behind this distinction between a perfect framework and what really exists and incorporate (1) poor plan of frameworks and procedures, (2) the framework's powerlessness to react to changing patient socioeconomics and related necessities, (3) an inability to acclimatize the quickly developing and progressively complex science and innovation base, (4) moderate appropriation of data innovation advancements expected to give care, (5) little convenience of patients' different requests and needs, and (6) faculty deficiencies and poor working conditions.

The social insurance framework can barely be known as a framework. Or maybe it is a bewildering exhibit of very decentralized divisions. In spite of the fact that the extent of doctor bunches is growing, 37 percent of rehearsing doctors are still in solo or two-man rehearses (Center for Studying Health System Change, 2002). The wellbeing plan area is getting some distance from structures that can encourage combination and coordination, with the piece of the overall industry of wellbeing support associations (HMOs) falling and favored supplier associations (PPOs) ending up progressively prominent (Kaiser Family Foundation and Health Research and Educational Trust, 2002). What's more, despite the fact that the emergency clinic area has been uniting in numerous business sectors—of the 5,000 network medical clinics, more than 3,500 have a place with some system or framework—the vast majority of these courses of action are centered around regulatory as opposed to clinical joining (American Hospital Association, 2000; Lesser and Ginsburg, 2000). As Ken Shine, previous leader of the Institute of Medicine (IOM), confirmed at the summit:

**Introduction:**

We work our human services framework like a house industry, enormous, huge bungalows with best in class advancements to think about patients, yet foundation which is absolutely insufficient, frameworks which don't converse with one another (Shine, 2002). The nonattendance of frameworks, or inadequately planned frameworks, and the subsequent absence of incorporation are evident crosswise over parts, just as inside individual human services associations. Such frameworks can hurt patients or neglect to convey what patients need. A past IOM report makes plentifully certain that the powerlessness to apply information about human factors in frameworks plan and the inability to consolidate well-recognized wellbeing standards into social insurance, (for example, institutionalizing and rearranging gear, supplies, and procedures) are key supporters of the indefensibly high number of therapeutic blunders that happen (Institute of Medicine, 2000).

Mary Naylor, School of Nursing, University of Pennsylvania, a specialist at the summit, resounded this reality: We have both a culture and association of consideration that different our consideration into particular frameworks—emergency clinics, home consideration, talented nursing offices—with minimal formal correspondence, connections, or cooperation between and among those settings… .And suppliers don't really observe that they're in charge of the end result for individuals as they move starting with one dimension of consideration then onto the next. We don't give a great deal of consideration to issues of value evaluation, especially in those troublesome hand-offs or changes starting with one dimension of consideration then onto the next (Naylor, 2002).

The Quality Chasm report likewise focuses on that an updated framework is predicated on interdisciplinary groups. In the present framework, in any case, wellbeing experts cooperate, however show little of the coordination and joint effort that would portray an interdisciplinary group. Numerous variables, including varying proficient and individual points of view and qualities, job rivalry and turf issues, absence of a typical language among the callings, varieties in expert socialization forms, contrasting accreditation and licensure guidelines, installment frameworks, and existing chains of command, have diminished the framework's capacity to work, making characterized jobs prevail over gathering patients' needs. The chain of command in which doctors rule and the accentuation on accepting individual accountability for basic leadership result in a dependence on close to home responsibility and an inability to request the commitments of other people who could bring included knowledge and applicable data, whatever their formal certifications (Helmreich, 2000; Institute of Medicine, 2001a).

The subsequent absence of progression and coordination of consideration, miscommunication, repetitive and inefficient procedures, and overabundance costs have brought about patient misery (Institute of Medicine, 2001a; Larson, 1999). Patients and families generally report that parental figures show up not to arrange their work or even to realize what each other are doing. Patients invest a lot of energy counseling with a perpetual stream of doctors, attendants, advisors, social laborers, home consideration laborers, nutritionists, drug specialists, and different experts, who time after time are oblivious of past therapeutic narratives, prescriptions, or treatment plans and in this manner work experiencing some miscommunication. At the point when patients are moved starting with one setting then onto the next—for instance, from emergency clinic to restoration focus to home—discontinuity of consideration brings about covering or clashing treatment that is exorbitant and befuddling and, to top it all off, unfavorable to the patient. In an ongoing review, 85 percent of doctors overviewed expressed that at least one antagonistic results result from clumsy consideration, and the greater part proposed that an absence of coordination is generally the reason for patients getting opposing wellbeing data from suppliers

Concentrates demonstrate that powerful treatment of ceaseless conditions should be nonstop crosswise over settings and kinds of suppliers. Clinicians need to work together with one another and with patients to create joint consideration plans with settled upon objectives, targets, and execution steps. Such consideration should bolster understanding self-administration and incorporate normal clinician development, both up close and personal and through electronic methods (DeBusk et al., 1994; Von Korff et al., 1997; Wagner et al., 2001; Wagner et al., 1996). Clinicians rehearsing in such a situation should be successful individuals from an interdisciplinary group, give care that is tolerant focused, and be capable in informatics applications.

An ongoing review underscored issues looked by the incessantly sick, with around three of each four respondents revealing trouble in getting medicinal consideration. In particular, 72 percent had encountered trouble in getting care from an essential consideration doctor, 79 percent from a therapeutic master, and 74 percent from suppliers of medication treatment (Partnership for Solutions, 2002b). This equivalent review showed that, because of the absence of coordination, the constantly sick were getting spotty or opposing data and confronting avoidable inconveniences. At the summit, Mary Naylor portrayed a common genuine case of the absence of coordination for the incessantly sick:

Her consideration was described by poor correspondence. Very little consideration [was paid] to her inclinations or the inclinations of her relatives in basic leadership about what care [she ought to receive] and what site she ought to go to, and what the arrangement of consideration ought to be at every one of those locales. There was extremely poor exchange of data from one site to the next; truth be told, basic bits of her consideration plan were not imparted from the medical clinic to the nursing home, bringing about a crisis room visit inside several days of release to the gifted nursing office. What's more, there was no go-to person, no merchant of consideration, nobody there upholding for her, for her family, and organizing this whole experience, all of which occurred in a brief timeframe (Naylor, 2002).

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In the course of the most recent 50 years, there has been an unfaltering increment in subsidizing for biomedical research that has brought about unprecedented advances in clinical learning and innovation. From a beginning of about $300 in 1887, the National Institutes of Health (NIH) has been appropriated almost $23.4 billion for 2002 (National Institutes of Health, 2002), while speculation with respect to pharmaceutical firms has ascended from $13.5 billion to $24 billion somewhere in the range of 1993 and 1999 (Pharmaceutical Research and Manufacturers of America, 2000). Moreover, innovative work in the medicinal gadget industry, supported generally by private dollars, totaled $8.9 billion of every 1998 (The Lewin Group, 2000). Aftereffects of this speculation incorporate a multiplying of the normal number of new medications affirmed every year since the 1980s (The Henry J. Kaiser Family Foundation, 2000) and exponential development in the quantity of clinical preliminaries from around 500 per year during the 1970s to in excess of 10,000 every year today (Chassin, 1998). There are no signs that this development will lessen at any point in the near future—nor would we need that to occur.

Generally, it has been expected that wellbeing experts can analyze and treat, assess new tests and techniques, and create clinical practice rules, all utilizing the preparation at first got from their scholastic training and progressing practice involvement. This suspicion is never again legitimate, with human memory winding up progressively temperamental in keeping pace with the consistently growing information base on powerful consideration and its utilization in social insurance settings. For clinicians, simply remaining side by side of advances, not to mention getting dynamic preparing in or involvement with new systems and methodologies, can be an overwhelming errand. As David Eddy, a conspicuous quality master, has stated, the "multifaceted nature of current medication surpasses the inborn confinements of the unaided human personality" (Millenson, 1997:75). Albeit no professional needs to retain the consequences of 10,000 clinical preliminaries that length numerous territories of claim to fame, fast extension of information is happening even inside explicit zones. For instance, as William Richardson noted at the summit, the quantity of randomized controlled preliminaries on diabetes distributed in the course of the most recent 30 years expanded from around 5 to more than 150 every year.

As William Richardson asked summit members, "In the event that we can't keep up now, by what means will we react to the remarkable advances that will develop amid this new century?" (Richardson, 2002). These advances incorporate, among others, the utilization of genomics to analyze and in the end treat malady; building revelations, for example, scaling down and mechanical technology; and the use of cutting edge epidemiological learning, particularly as it identifies with bioterrorism, to huge populaces and databases (Institute of Medicine, 2001a).

One obstruction to the more prominent utilization of correspondences and data innovation is the nonattendance of national models for the catch, stockpiling, correspondence, handling, and introduction of wellbeing data (Work Group on Computerization of Patient Records, 2000). Another is protection and information security issues. Administrative prerequisites overseeing email use with patients, for example, the Health Insurance Portability and Accountability Act, intended to help ensure the security and privacy of patient therapeutic records, will help to some degree in such manner. Notwithstanding, theQuality Chasm report underscores that without a national duty and money related help for structure a national wellbeing data framework, advance around there will be agonizingly moderate.

Numerous patients, in any case, have communicated dissatisfaction with their powerlessness to take part in basic leadership, to get the data they need, to be heard, and to take part in frameworks of consideration that are receptive to their and their families' and parental figures' needs and qualities (Partnership for Solutions, 2002a). Studies have shown considerable deficiencies among wellbeing experts in comprehension and speaking with patients (Laine and Davidoff, 1996; Meryn, 1998; Stewart et al., 1999), just as in their capacity to give sufficient data to educated basic leadership (Braddock et al., 1999). An early critical examination uncovered that in 69 percent of visits, doctors did not enable patients to finish their opening explanation of indications and concerns, hindering after an interim of 18 seconds. Patients were allowed the chance to express their full rundown of worries in just 23 percent of visits (Beckman and Frankel, 1984). A later report on a similar subject uncovered comparable outcomes, with inability to get the patient's finished plan bringing about late-emerging concerns and botched chances to gather possibly important data (Marvel et al., 1999).

Social insurance has dependably been liable to patterns in oversupply and undersupply of different wellbeing experts, however the present deficiency of medical caretakers is unique, with numerous specialists saying it won't be settled rapidly (Buerhaus, 2000). In the year 2000, the nursing lack was evaluated at 6 percent, with 1.89 million full-time enlisted nurture in the workforce and request anticipated at 2 million. On the off chance that patterns proceed, the lack is anticipated to skyrocket to 29 percent by 2020 (Health Resources and Services Administration, 2002). Completely 75 percent of every present opportunity at emergency clinics are for medical attendants (American Hospital Association, 2001). In spite of the fact that enlistments in section level baccalaureate programs in nursing expanded in fall 2001, finishing a 6-year time of decay, the quantity of understudies in the instructive pipeline is as yet deficient to satisfy the anticipated need for the million new medical caretakers required throughout the following 10 years (American Association of Colleges of Nursing, 2002). These issues are exacerbated by an expanding deficiency of nursing staff. As per the American Association of Colleges of Nursing (AACN), of in excess of 9,000 staff at AACN-part nursing schools, just somewhat in excess of 50 percent have a doctorate, and there is a vast diminishing in the quantity of nursing understudies with a graduate degree who are seeking after scholarly vocations (Berlin and Sechrist, 2002).

The difficulties featured above call for new jobs and new methodologies with respect to wellbeing experts. For a certain something, to think about patients, the effective wellbeing proficient in this century should ace data innovation, utilizing its abilities to oversee data and access the most recent proof. In addition, as patients touch base with better and more data from the Internet and progressively demand that their wants, needs, and qualities be met, human services experts will be called upon to alter their jobs to incorporate those of guide, mentor, and accomplice. Giving the elevated amounts of coordination and joint effort required for the constantly sick while tending to staff deficiencies will necessitate that wellbeing experts work in interdisciplinary groups, figuring out how to dispense duty adequately and give the fitting aptitude blend in an assortment of settings and circumstances. Wellbeing experts should likewise have a grip of plan and quality improvement standards so they can streamline and institutionalize forms for better security and quality.

As stressed in the Quality Chasm report, wellbeing experts are working in a framework that regularly does not bolster them in conveying the most noteworthy quality consideration dependent on the most recent science, not to mention care that satisfies patients (Institute of Medicine, 2001a). The report puts forward a structure for how the framework may be changed to close the gorge that exists between what we know to be great quality consideration and what the framework really gives.

At the center of an overhauled social insurance framework are wellbeing experts. The viability of a framework in reacting to persistent requirements relies on an assortment of factors– offices, supplies, condition of learning, data innovation—however such sources of info are inane without properly taught experts working inside and ceaselessly overhauling the framework to adjust to progressing and future difficulties. Executing the motivation put forward in the Quality Chasm report will require major changes in wellbeing callings instruction. Wellbeing experts, both those in scholastic settings and those as of now practically speaking, must be taught diversely so they can work as adequately as conceivable in an improved social insurance framework—one concentrated on upgrading quality and security. Most imperative, experts should separate the storehouses that exist inside the framework, and look to comprehend what others offer so as to do what is best for the patient. Further, wellbeing experts must be given the apparatuses that will engage them to roll out progressing improvements in the framework that will consistently upgrade care for patients. In spite of the fact that the need is squeezing, real difficulties face the individuals who might change wellbeing callings training. Some of those difficulties are refered to in theQuality Chasm report (Institute of Medicine, 2001a) and were reverberated at the Health Professions Education Summit:

• A absence of financing to audit educational modules and showing strategies and of the assets required to roll out required improvements

• Too much accentuation on research and patient consideration in numerous scholarly settings, with little reward for instructing

• A absence of personnel and workforce advancement to guarantee that staff will be accessible at preparing locales and ready to show understudies new capabilities successfully

• No composed oversight over the continuum of instruction, and divided obligations regarding undergrad and graduate training

• No reconciliation crosswise over oversight forms, including accreditation, permitting, and confirmation

• The absence of a proof base surveying the effect of changes in showing strategies or educational programs

• A lack of visionary pioneers

• Silo structures and long-standing disciplinary limits among and over the callings

• Unsupportive culture and standards in wellbeing callings training

• Overly packed educational program and contending requests

• Insufficient channels for sharing data and best practices

To put it plainly, these difficulties have kept the instructive framework from completing a superior employment at gathering the prerequisites of the conveyance framework. Pioneers and administrators of emergency clinics, wellbeing plans, and social insurance rehearses refer to expanding aptitude deficiencies in their workforces, including specialized and PC abilities, basic reasoning, correspondence, the board, appointment, supervision abilities, and a frameworks viewpoint (Allied Health Workforce Innovations for the 21st Century Projects, 1999; Institute of Medicine, 2000; National Council for State Boards of Nursing, 2001). Ongoing alumni of instructive projects refer to comparative expertise shortages in their planning for present day human services professions (Blumenthal et al., 2001; Cantor et al., 1993).

**Findings:**

• Poor frameworks configuration has prompted blunders, low quality of consideration, and disappointment among patients and wellbeing experts.

• The needs of the incessantly sick are not being satisfactorily met. Tending to those necessities requires the change of frameworks of consideration and more prominent coordination and cooperation among wellbeing experts, just as more regard for aversion and the conduct determinants of wellbeing.

• Technological propels in data innovation and an extended proof base picked up from research on clinical practice can possibly change human services, yet such advances have not been sufficiently saddled.

• Patients and customers are presently progressively educated about their wellbeing. Accordingly, there is a requirement for another relationship of shared basic leadership among patients and human services suppliers. Suppliers additionally should be progressively mindful to quiet qualities, inclinations, and social foundations.

• Workforce issues identified with deficiencies and compelling arrangement of existing experts should be tended to before nature of consideration is additionally traded off.

The Quality Chasm report, reverberated by every one of the keynote spokesperson at the summit, calls upon the clinical training network to give transformational authority in light of the difficulties sketched out above. At the summit, Don Berwick, Institute for Healthcare Improvement, portrayed the motivation behind the human services framework—at first enunciated by the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry—as constantly diminishing the weight of sickness, damage, and incapacity and improving the wellbeing status and working of the U.S. populace.



**References:**

* Beckman, H.B., and R.M. Frankel. 1984. The effect of physician behavior on the collection of data. Annals of Internal Medicine 101 (5):692-6. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/6486600)]
* American Association of Colleges of Nursing. 2002. "Enrollments Rise at U.S. Nursing Colleges and Universities Ending a Six-Year Period of Decline." Online. Available at [http://www​.aacn.nche​.edu/Media/NewsReleases/enrl01.htm](http://www.aacn.nche.edu/Media/NewsReleases/enrl01.htm) [accessed 2002].
* American Hospital Association. 2000. Resource Center Fact Sheet. Fast Facts on U.S. Hospitals. Hospital Statistics, 2000. Chicago, IL: Health Forum - An American Hospital Association Company.
* American Hospital Association. 2001. The hospital workforce shortage: immediate and future. Trend Watch 3 (2):1-8.
* American Nurses Association/NursingWorld.Org. 2001. "On-line Health and Safety Survey: Key Findings." Online. Available at [http://nursingworld​.org/surveys/keyfind​.pdf](http://nursingworld.org/surveys/keyfind.pdf) [accessed 2002].
* Balas, E.A. 2001. Information systems can prevent errors and improve quality. Journal of the American Medical Informatics Association 8 (4):398-99. [[PMC free article](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC130085/)] [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/11418547)]
* Benbassat, J., D. Pilpel, and M. Tidhar. 1998. Patients preferences for participation in clinical decision making: A review of published surveys. Behavorial Medicine 24 (2):81-88. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/9695899)]
* Berlin, L.E., and K.R. Sechrist. 2002. The shortage of doctorally prepared nursing faculty: A dire situation. Nursing Outlook 50 (2):50-56. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/12029296)]
* Berwick, D. 2002. "Crossing the Quality Chasm: Next Steps for Health Professions Education; Keynote Address." Online. Available at [http://www​.kaisernetwork​.org/health\_cast/hcast\_index​.cfm?display​=detail&hc=601](http://www.kaisernetwork.org/health_cast/hcast_index.cfm?display=detail&hc=601) [accessed Nov. 12, 2002].
* Blegen, M.A., C.J. Goode, and L. Reed. 1998. Nurse Staffing and Patient Outcomes. Nursing Research 47 (1):43-50. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/9478183)]
* Blendon, R.J., C.M. DesRoches, M. Brodie, J.M. Benson, A.B. Rosen, E. Schneider, D.E. Altman, K. Zapert, M.J. Herrmann, and A.E. Steffenson. 2002. Views of practicing physicians and the public on medical errors. N Engl J Med 347 (24):1933-40. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/12477944)]
* Blendon, R.J., C. Schoen, K. Donelan, R. Osborn, C. M. DesRoches, K. Scoles, K. Davis, K. Binns, and K. Zapert. 2001. Physicians views on quality of care: A five-country comparison. Health Affairs 20 (3):233-43. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/11585172)]
* Blumenthal, D., M. Gokhale, E.G. Campbell, and J. S. Weissman. 2001. Preparedness for clinical practice: Reports of graduating residents at academic health centers. Journal of the American Medical Association 286 (9):1027-34. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/11559286)]
* Braddock, C.H.3., K.A. Edwards, N.M. Hasenberg, T.L. Laidley, and W. Levinson. 1999. Informed decision making in outpatient practice: Time to get back to basics. Journal of American Medical Association 282 (24):2313-20. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/10612318)]
* Buerhaus, P. 2000. A Nursing Shortage Like None Before. Creative Nursing 6 (2):4-8. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/11051909)]
* Bureau of Labor Statistics. Pharmacists. 2000. Occupational Outlook Handbook . Washington, DC: U.S. Department of Commerce.
* Calabretta, N. 2002. Consumer-driven, patient-centered health care in the age of electronic information. Journal of Medical Library Association 90 (1):32-37. [[PMC free article](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC64755/)] [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/11838457)]
* Cantor, J.C., L.C. Baker, and R.G. Hughes. 1993. Preparedness for practice. Young physicians views of their professional education. JAMA 270 (9):1035-40. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/8350444)]
* Center for Studying Health System Change. 2002. "CTSonline: Physician survey results." Online. Available at [http://www​.hschange.com/index​.cgi?file=cts1](http://www.hschange.com/index.cgi?file=cts1) [accessed 2002].
* Chassin, M.R. 1998. Is health care ready for Six Sigma quality? Milbank Quarterly 76 (4):565-91, 510. [[PMC free article](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2751107/)] [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/9879303)]
* Chassin, M.R., R.W. Galvin, and the National Roundtable on Health Care Quality. 1998. The urgent need to improve health care quality. Journal of the American Medical Association 280 (11):1000-1005. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/9749483)]
* Chen, F.M., J. Hickner, K.S. Fink, J.M. Galliher, and H. Burstin. 2002. On the front lines: family physicians preparedness for bioterrorism. Journal of Family Practice 51 (9):745-50. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/12366891)]
* Cooksey, J.A., K.K. Knapp, S.M. Walton, and J.M. Cultice. 2002. Challenges to the pharmacist profession from escalating pharmaceutical demand. Health Aff (Millwood) 21 (5):182-88. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/12224881)]
* Cooper, R.A. 2002. There’s a shortage of specialists: Is anyone listening? Academic Medicine 77 (8):761-6. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/12176686)]
* Cooper, R.A., T.E. Getzen, H.J. McKee, and P. Laud. 2002. Economic and demographic trends signal an impending physician shortage. Health Affairs 21 (1):140-54. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/11900066)]