



Review Article

## Innovation in business model and finances in pediatrics

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### ABSTRACT

Innovation is something original, more effective, and, as a consequence, new, that “breaks into” the market or society, by development and implementation of a new product, process, or service, with the aim of improving efficiency, effectiveness, or competitive advantage. Entrepreneurship, by contrast, is applying the innovation to bring the ideas to life. It is a social invention, which lets people do what they could not previously do. Health-care delivery is a complex subject, which determines whether a government succeeds in improving the health of the nation or not. In this article, we will be talking on the innovations – specifically financial innovations as applicable to neonatal care, pregnancy care, and pediatrics – as this can make a huge impact on our everyday life.

**Keywords:** Innovations, Entrepreneurship, Financial, Newborn screening

Health care is a basic need of a human being, but still universal health care is not available in most countries. Sweden has provided universal health coverage for legal residents since 1955,<sup>[1]</sup> Sweden spending 9.2% of gross domestic product (GDP) on health care in 2008, as compared to the Organization for Economic Cooperation and Development an average of 8.9, and 16.6% of the GDP by the United States of America (USA).<sup>[2]</sup> India spending 0.9% of GDP is nowhere near providing universal health-care needs of the country.<sup>[3]</sup> It is not going to improve in the near future despite anyone’s efforts with only 3.7% of the population paying the income tax! Hence, most Indians depend on private health care to fulfill their needs, which needs a lot of innovation to ensure universal health care is affordable to everyone. Since health-care costs are the biggest expenditure for the common man – private health care becomes unaffordable most of the time and it increases the population to start being suspicious of private health care due to lack of transparency.

Innovation is something original, more effective, and, as a consequence, new, that “breaks into” the market or society, by development and implementation of a new product, process, or service, with the aim of improving efficiency, effectiveness, or competitive advantage. Innovation and entrepreneurship are two closely related words used in the business world. Entrepreneurship, by contrast, is applying the innovation to bring the ideas to life. It is a social invention, which lets people do what they could not previously do.

Health-care delivery is a complex subject. Health-care delivery determines whether a government succeeds in improving the health of the nation or not. In this article, we will be talking on the innovations in a business model – specifically financial innovations as applicable to neonatal care, pregnancy care, and pediatrics – as this can make a huge impact on our everyday life.

Pregnancy and childbirth are fraught with danger for most families – as traditionally, the girls side is supposed to bear the bills for the childbirth and the cost could be unknown leaving the families

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sometimes with unexpected expenses and also outcome. In India, it continued to remain like that for most families – some were comparing it to a wedding! Due to the uncertain nature of the finances involved in labor, delivery, and recovery, some people dread going to the private hospitals with the unknown. In some cultures, it is even negotiated to be part of the dowry – at the time of marriage. Moreover, some women may develop few known complications, minor or major infections, which along with the baby's needs – like the possible need for phototherapy or if the baby were to be born premature or has any other diseases requiring treatment – can lead to unknown financial burden on the family/ies.

We conceived “the concept of Cloudnine” – It's an English idiom meaning a state of perfect happiness, a feeling of well-being or elation – for a mother and baby hospital, as we felt the need to have a separate mother and baby hospital to separate illnesses – as we believed in the concept of pregnancy being a WELLNESS and not an ILLNESS.<sup>[4]</sup> But what we realized is that parents were going through a lot of stress – because of the uncertainty of the finances involved for the labor and delivery. Hence, among other things we did, we also felt the joyous moment should not be spoilt with the unnecessary financial issues. We created delivery packages – for both normal delivery and cesarean sections – taking into account all possible charges – doctors (obstetrician, pediatrician, and, if required, anesthetist in case of epidural pain relief for normal deliveries and for cesarean sections), consumables used, drugs commonly used, and the hospital charges – this was a comprehensive charge – with no need of the husband or the family dashing down to the pharmacy or other places every time something was required, to get the medicines or other consumables to be “bought” and given to the doctor or the nurse concerned, as used to happen in all the hospitals. This changed the way the prospective parents enjoyed their birthing process – as even before they got admitted, they knew what they were in for. They were left in peace to enjoy their newborn with no worries of dashing down here and there. They did not have to have the unknowns – how they can arrange the finances, whether they can afford this hospital or the doctor or not – were able to make a judicious decision. This led to many other hospitals following suit – the result is that it is not stressful anymore for most families as they could choose the hospital according to their needs and finances.

There was also no knowledge about the importance of newborn screening and the need for this in 2005.<sup>[5]</sup> Hence, we created an educational session in antenatal classes – explained to the prospective parents – what is newborn screening and why it is important. We explained that no baby can be examined for any biochemical or metabolic abnormality by any pediatrician, however experienced he/she may be – they can only do so for any physical abnormality –

and biochemical or metabolic abnormality (though rare) can happen to any baby, and does not necessarily depend on any prior family history. We produced leaflets to this effect and made these available. We created a small additional package for this – and offered to the parents – and for those who declined we got them to sign a “consent for not consenting to these tests – with the declaration, that they have read and understood the importance of newborn screening but still they would like to decline” and this made the acceptance of the newborn screening close to 100%. Now 15 years down the line, this has become a routine practice in many hospitals, especially in Bangalore and across India. With this, we have eliminated preventable causes of mental retardation like congenital hypothyroidism and also identified and treated many metabolic diseases, who would have otherwise become statistics.

Premature babies had remained a taboo for most parents and obstetricians. No one wanted to take the risk and no one wanted to take a chance with the survival and possible developmental problems with the premature babies.

At Cloudnine, we introduced the concept of transparency and packages for the care of preterm babies too. Based on the data we had, we prepared a chart showing survival and morbidity chances for various gestational ages of prematurity – which was a welcome relief for both the obstetricians and the prospective parents – and the financial packages were an incentive to know how much they are in for – else they could choose other ways of caring for their babies – if they could not afford – like crowd funding. With this, we increased the number of premature babies being catered to and increased their intact survival too – as the obstetricians turned optimistic and catered for the pregnancy better with all the relevant antenatal modalities of treatment. For example – we had Neonatal Intensive Care Unit packages of 16 lakh rupees for 24 and 25 weekers, and 10–12 lakhs rupees for 28 weekers and so on.

Vaccination soon after birth was not done by most hospitals to keep the cost down and parents were being asked to come few days later for the same – and many parents realized that childbirth is not the end of their financial woes. It continued after that. Hence, we designed vaccination packages for both compulsory and optional vaccines for the 1<sup>st</sup> year – giving them an overview and also discounts if they were to book the whole package together – so that they are aware of what is involved and what is not. This uncertainty of the financial burden taken off from their shoulders was a big thing for many parents.

Pregnancy is a “fixed” term of 40 weeks or popularly known to the common man as an event of 9 months. During these 9 months, the World Association of Perinatal Medicine has issued guidelines as to how many visits are expected for a pregnant woman – during the antenatal period, how many

blood tests and how many ultrasound scans. We arrived at the charges incurred for these along with the consultations – and discounted the whole charge by 20% – for those who book the whole 9 months’ antenatal package – so that they are aware of what is in store for them – and also they can avail the discount – this way – most prospective parents – need not “wait” every time they came to see their obstetrician – nor for the blood tests nor the scans – as they knew when to expect what and could also plan their finances. This gave the prospective parents such independence and liberty to enjoy their parenthood – that we made their life easier – especially for the working parents with limited income/time to worry about all these.

Among other things, we did this innovation in financial models – for various things related to both baby and mother care, including antenatal packages – the plan was simple – calculate the charges incurred for the duration as a whole, discount it by 20–30% as it improves the cash flow for the hospital, if parents book them in advance, and for parents it gives the confidence knowing how much they are expected to spend. With this – they can enjoy parenthood better than before. This financial independence is something very important for every family irrespective of the procedure or the treatment planned – as health care is one of the most “hidden” expense lists for most Indians or for that matter most Asians.

Packages in health care can be designed with what is involved – doctors charges, hospital charges, consumables, medication charges, taxes involved, and any other relevant charges – like investigations for that particular problem – once the total cost is worked out – one could give an incentive for people who pay the whole “expected packages” in advance – this not only improving the cash flow of the hospital, it also allows the hospital to “plan” their admissions/bed capacity – to make efficiency even better. It also helps for transparency. In addition to these financial innovations, we allowed husbands to be part of the delivery process – be it a normal delivery or a cesarean section – and this helped increase the transparency and accountability, trust for them on the doctors and private health-care facilities – though this is not the place to elaborate much on that. For the common man, knowing what is in store for them is so much relief than the unknown. Hence, everyone is a winner with the financial packages and the innovation has revolutionized the maternal and neonatal industry in a big way – a small step in the long road ahead to improve the health-care delivery in India.

Despite the innovation in the financial area, obstacles persist. It takes a lot of effort for minimal innovations in financial models, as these have to be accepted by the insurance companies, who look at these under an electron microscope before approving – and customers verify this – thinking that there is a “catch” somewhere – in view of their history. But

once the insurance companies are convinced, which they did eventually after a year or so – this became the norm.

There are other areas where financial innovations can happen in private health care. Private health care accounts for 80% of the needs of the country in India.<sup>[6,7]</sup> As a group, private health care should be focused on getting themselves tax efficient, tax rebatable for all goods related to health – that way the cost of healthcare can come down. Private health care can also innovate many other financial areas – like instead of buying expensive equipment or buy under loan – they can lease them – which covers the cost of buying, maintenance (annual maintenance contracts and costs – popularly known as AMC). The government should give financial incentives to the manufacturers for lending the equipment – and also simplify the depreciation costs – which will go a long way. In addition, the consumables – could be supplied to the hospitals by the companies directly without the middle men – and the expensive consumables could be ordered 2 days before the need – thus reducing the cost of paying for it by the private health care and the cash flow – which, in turn, reduces the cost to the consumer.

The tele-consultation – which got approved during the pandemic by the Government of India and the Medical Council of India – was long overdue. In a country as big or bigger than all the European countries united together with regional difficulties in access to health-care facilities – telemedicine is the need of the hour. With telemedicine, the cost of health care can come down significantly as the unnecessary travel by the patient, avoiding the long queues in the hospital and crowded lobbies – will go a long way in increasing productivity and choice of the health-care provider to the consumer. Furthermore, people can take a second opinion for various issues they may have without much difficulty. Irrespective of their location, people will have access to their trusted doctor – which eventually reduces further doctor/patient frictions or medicolegal problems.

Overall, health-care delivery is a complex system<sup>[8]</sup> – but financial innovations in reducing hospital charges and increasing transparency will go a long way in making private health care being accepted as a friendly alternative rather than as a foe.

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### Declaration of patient consent

Patient’s consent not required as there are no patients in this study.

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### Conflicts of interest

There are no conflicts of interest.

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