For any $1\leq i\leq n$ we have

$$P(X=i)=\sum_{j=0}^{n}P(X=i|N=j)P(N=j)=\sum_{j=i}^{n}P(X=i|N=j)P(N=j)=\sum_{j=i}^{n}\binom{j}{i}s^i(1-s)^{j-i}\binom{n}{j}p^j(1-p)^{n-j}$$